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A SYSTEM FOR PRIORITIZING FUTURE RECREATION SITES ON THE TALLY LAKE RANGER DISTRICT FLATHEAD NATIONAL FOREST

Part 1

by

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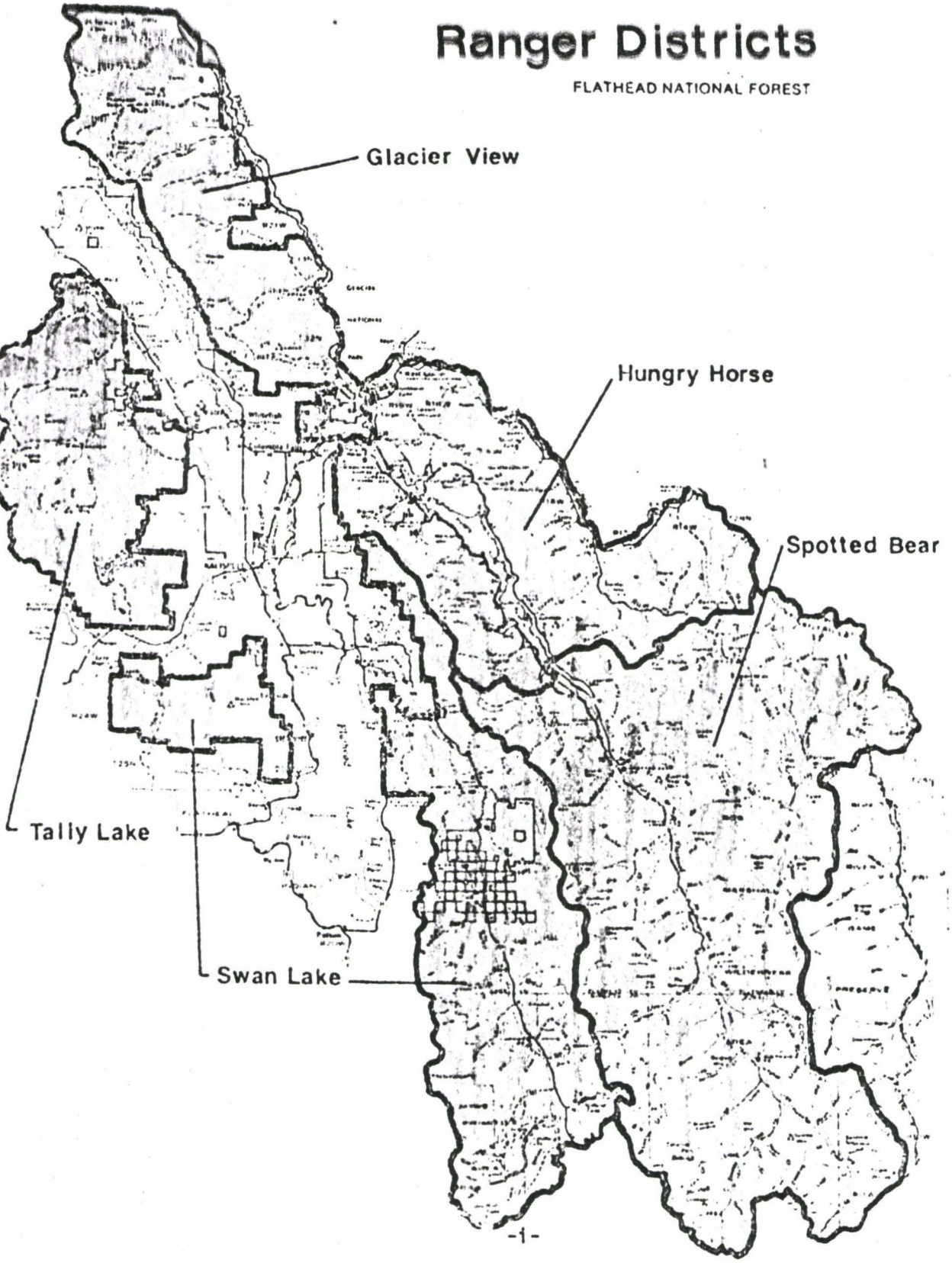
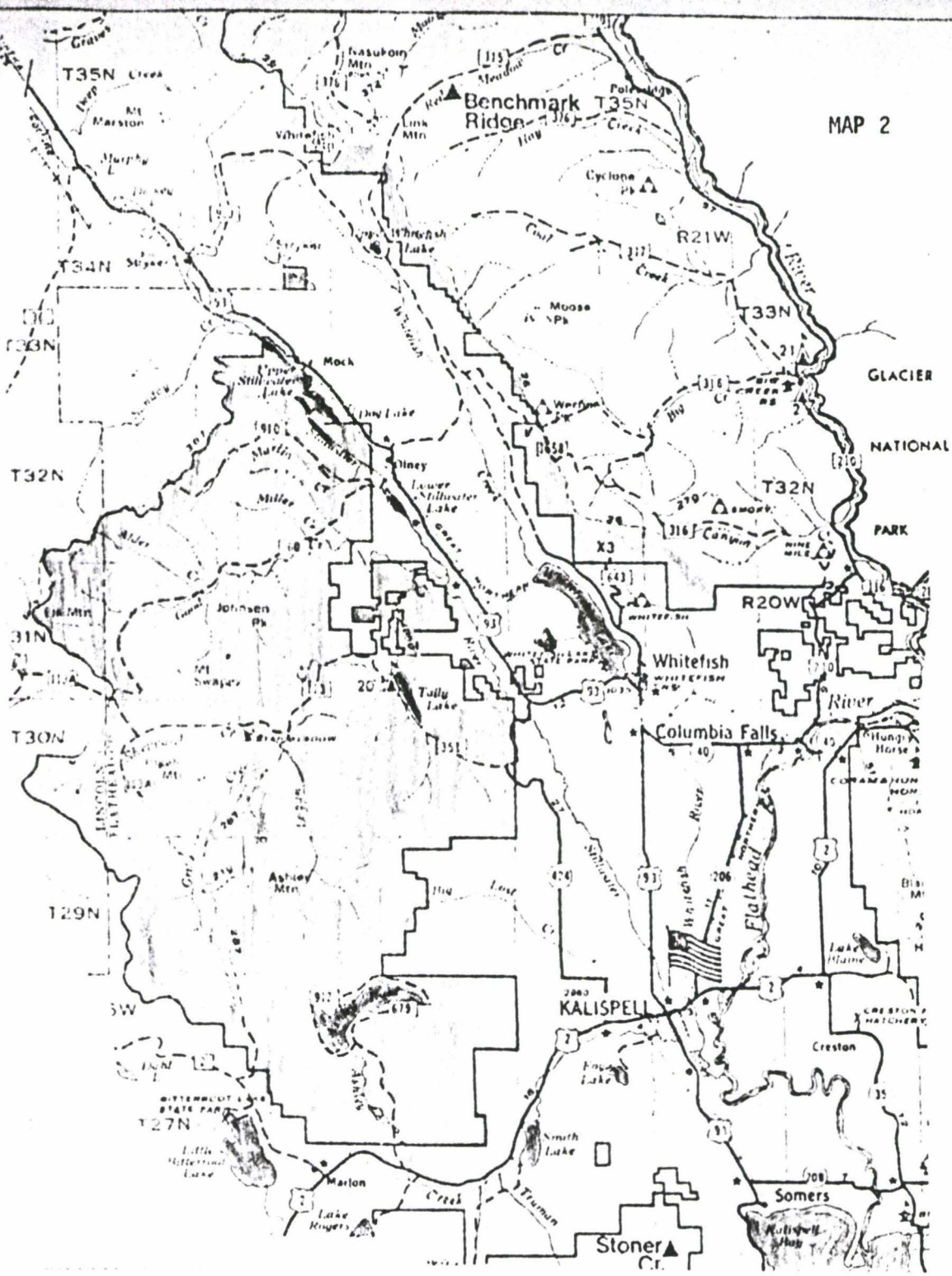
Planning Forester

MAP 1

Ranger Districts

FLATHEAD NATIONAL FOREST




MAP 2
T35N
Benchmark Ridge
T35N
R21W
T34N
T33N
T33N
GLACIER
NATIONAL
PARK
T32N
T32N
R20W
Whitefish
Columbia Falls
River
T30N
T29N
KALISPELL
Flathead
Creston
Somers
T27N
Marion
Stoner
Mock
Johnsen Pk
Ashley Mtn
Cyclone Pk
Moose Pk
Tally Lake
Upper Stillwater Lake
Lower Stillwater Lake
Whitefish Lake
Swan River
Ashley Creek
Truman Creek
Lake Rogers
Little Bitterroot Lake
Bitterroot Lake State Park
Lake Blaine
Hungry Horse
Coram
Meadow Creek
Link Mtn
Mt Marston
Murphy
Graves Creek
Mt Swaney
Miller Creek
Martin Creek
Whitefish River
Stillwater River
Ashley Creek
Smith Lake
Kalispell Bay
Creston Hatchery
Columbia Falls
Whitefish
Flathead River
Swan River
Hungry Horse
Coram
Meadow Creek
Link Mtn
Mt Marston
Murphy
Graves Creek
Mt Swaney
Miller Creek
Martin Creek
Whitefish River
Stillwater River
Ashley Creek
Smith Lake
Kalispell Bay
Creston Hatchery

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1. SITUATION

One of the most significant problems facing the public land manager today is the concerns surrounding disproportionate levels of resource funding as it relates to abnormal demands for a single resource output. This dilemma is not solely an isolated phenomenon, but can enter the manager's relm repeatedly, resulting in undesirable trade-offs and sometimes damaging, irreversible consequences. It is pointless to think that balanced funded programs will ever be a reality, especially when budgets are negotiable throughout the political and managerial fields. The land manager must recognize that resource values will continually be jeopardized until a more site specific plan is developed.

The Tally Lake Ranger District is acutely aware of the unequal funding situation. Today a new problem is recognized that even further separates each resource funding level. In 1979, the timber and road development programs were accelerated to meet the threat of a Mountain Pine Beetle epidemic. What was once a normal five-year timber program [1/] has been completely changed from mixed species sales to a predominant single species program and then compressed into a three-year time frame. Essentially the old program was discarded and a completely new plan was developed.

Usually presale work begins five years prior to a timber sale being awarded. This allows time for the planner to overcome landline location, rights-of-way, and budgeting problems and to complete a resource evaluation. In most cases five years is sufficient time to meet deadlines for a smooth planning operation. When that time frame is changed from five years to three years, and all new areas are under consideration, the pressure is on and many planning shortcuts are implemented. Obviously the chances of management errors are great and resource conflicts eminent.

Recreation is the key emphasis of this paper. To disregard the fact that other resources or management concerns are not similarly impacted would be a gross error. Each resource and land concern faces the test each fiscal year as to what emphasis the land will be managed. When funding is balanced, quality levels can be achieved. When funds are low, conflicts occur and quality drops. Generally that situation is confined to one resource and to a short duration.

A more complex situation arises when a single resource receives double or triple its normal funding level. That, in essence, places all other resource levels at a disadvantage. The management polarity of one dominant resource pulls from all other resources resulting in an overall drop in quality, not

1/ The Five-Year Timber Sale Program is a planning tool used by the Forest Service to identify a potential timber sale area and allow ample time (five years) for its planning and preparation work to be completed before it is advertized and contracted.

necessarily confined to one resource area. In 1980, it was easy to recognize that many recreation opportunities were being challanged by our urgency to meet accelerated timber harvest targets. Foresters, silviculturists, engineers and administrators from past experience know the dilemma of austere recreation budgets and, to some extent, the apathy given to recreation management. High quality recreation sites or activities have received little attention and unless funding, manpower and recreation planning were recognized and supported, these sites will obviously change.

A. PURPOSE

The purpose of this paper is to develop a system to prioritize future recreation sites and activities so they will be recognized and protected from more aggressive functional resource development and to schedule more site specific plans for highest priority sites and activities. This paper will:

1. Recognize the physical and biological situation on Tally Lake Ranger District (TLRD).

2. Evaluate how Tally Lake Ranger District fits with the recreation estate on the Flathead National Forest (FNF).

3. Determine demand for recreation as it relates to population, age and type of recreation.

4. Develop a rating system that will prioritize future recreation sites and activities.

5. Develop an "Action Plan" that will request funding and that will schedule site and activity planning by higher priority.

1. MOUNTAIN PINE BEETLE EPIDEMIC

Major insect outbreaks in the Northern Region is a natural phenomenon. When it comes to the Mountain Pine Beetle (MPB), Dendroctonus ponderosae; Hopkins, the epidemic is catastrophic since it attacks even-aged, mature lodgepole pine, Pinus contorta var. latifolia. This beetle attacks and kills lodgepole pine that are 80 years or older, eight inches diameter or larger and generally those trees on the best sites. (2)

TLRD has identified 320 million board feet (MMBF) of lodgepole pine that fits all high risk criteria (see map 3). In 1978, because of outbreaks in Glacier National Park and on the bordering Glacier View Ranger District (15), a decision was made to identify high risk stands and harvest half (160 MMBF) of the timber during the next three-year period, 1980 to 1982. Table 1 indicates the spread rate as determined in 1980. Also, see map 4 which shows the extent of MPB infestation in 1978. At this time, epidemic conditions have not substantially materialized on TLRD. The best projection is that by 1983 or 1984, it will become epidemic. As indicated on Table 1, the outbreak is starting to build momentum.

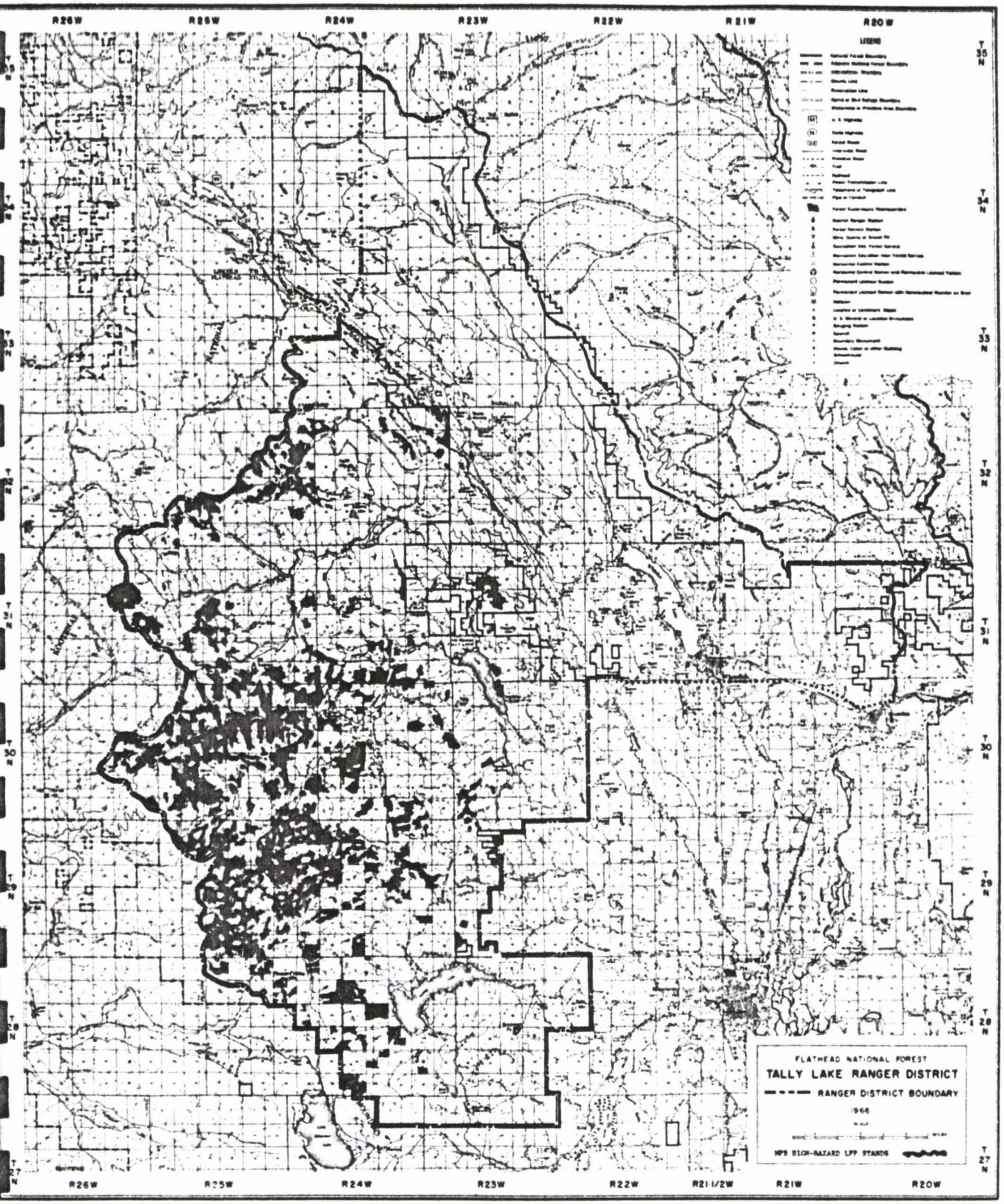
In 1979, the FNF developed the Mountain Pine Beetle Environmental Report (3). Alternative G (see Appendix A) was selected which supports a quick liquidation of half of the high risk lodgepole pine. The second half would be re-evaluated during FY81 to determine what portion of the remaining lodgepole pine volume could be harvested.

The selected alternative has caused a serious unbalanced management problem. Approximately seventy percent of the high risk stands are in eight management compartments. Since lodgepole pine generally occurs in pure stands (Fire Climax) and since prior to 1965, lodgepole pine carried a very low market value, large contiguous stands of lodgepole pine were never developed. Consequently, since there was no development planned for these stands, potential recreation sites and activities were never a concern. Now conditions have changed. There is a very prevalent threat that many future recreation attributes will be effected.

Table 1 lists infestation size and intensity by year for Glacier National Park, Glacier View Ranger District and Tally Lake Ranger District, October 1980.

YEAR	GLACIER NATIONAL PARK	GLACIER VIEW RANGER DISTRICT	TALLY LAKE RANGER DISTRICT
1972	1180 acres		
1973	3600 acres		
1974	4630 acres		
1975	13,354 acres	80 acres	
1976	103,687 acres	1213 acres	
1977	142,871 acres	27,610 acres	
1978	164,492 acres	78,500 acres	
*1979	216,082 acres	84,350 acres	100 acres
*1980	282,388 acres	179,105 acres	12,840 acres

* Acreage figures for 1979 and 1980 were received from Mark McGregor, Region Entomologist, State and Private Forestry, Missoula, MT, October 1980.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R24W
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T 35 N
T 34 N
T 33 N
T 32 N
T 31 N
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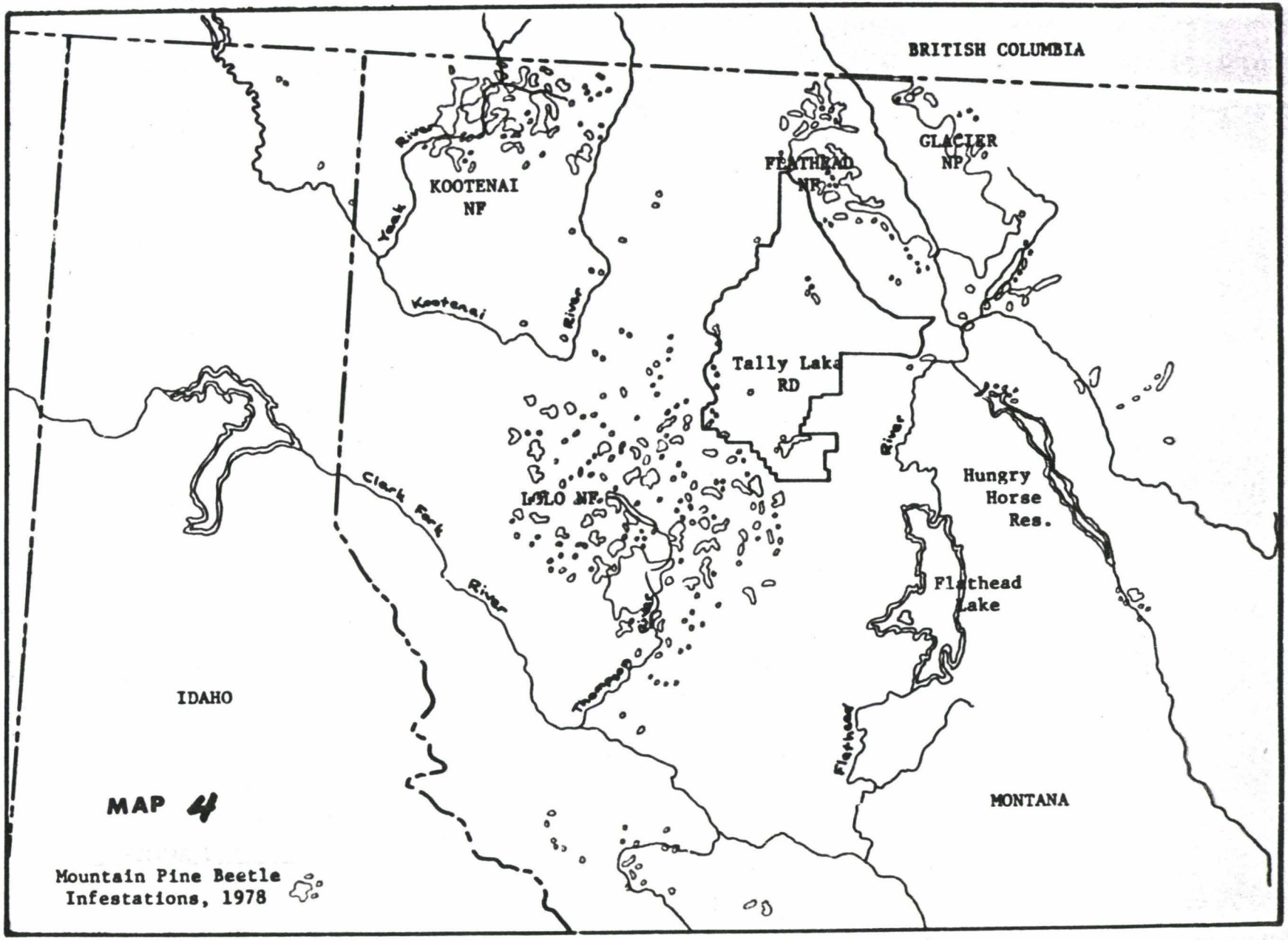
T 29 N
T 28 N
T 27 N
LEGEND
FLATHEAD NATIONAL FOREST
TALLY LAKE RANGER DISTRICT
RANGER DISTRICT BOUNDARY
1966
HFS HIGH-HAZARD LFP STANDS

MAP 3

4


BRITISH COLUMBIA
KOOTENAI NF
Yaak River
Kootenai River
FEATHERED NF
GLACIER NP
Tally Lake RD
LOLO NF.
Clark Fork River
Thompson
Hungry Horse Res.
Flathead Lake
Flathead
IDAHO
MONTANA
MAP 4
Mountain Pine Beetle Infestations, 1978

2. TIMBER MANAGEMENT

In 1897 the land now administered by the FNF became a Forest Reserve. From the beginning wood products from public lands became a strong economic factor in development of the Flathead Valley. Sawmills popped up around the valley, logging camps moved into the woods, and rivers became log driveways. In the 1930's the addition of skidding tractors and log trucks revolutionized the wood harvesting phase. From that point on, lumbering has become a primary economic base for Flathead County.

The rate of harvest is most significant when one considers the very short time frame involved. Prior to 1940, timber harvest on National Forest lands was insignificant. From 1940 to the present time the annual allowable cut has increased to a point where resource conflicts are a common challenge to the land manager. Table 2 shows the allowable cut from 1940 to 1980.

With the emphasis on the MPB the bulk of the Forest programmed harvest has been shifted to TLRD (3). Normally we prepared about 38.0 MMBF per year. A more recent plan showed the Forest cut to be around 105 MMBF, and when distributed to each district on the Forest, TLRD had a programmed harvest of about 30.0 MMBF per year. Table 3 shows a projected harvest plan from 1981 to 1985. Whatever the actual district's programmed harvest is, the accelerated program, starting in FY80, shows about six or seven years' harvest in a three-year period.

Table 2 - Timber Management, Flathead National Forest, 1940-1980

Year	Actual Sell MMBF/Yr	Programmed Harvest MMBF/Yr
1940-1950		5.0
1951-1958		10.5
1959		112.0
1960		112.0
1961		137.5
1962		137.5
1963		137.5
1964	135.0	137.5
1965	134.0	137.5
1966	138.0	137.5
1967	142.0	137.5
1968	147.0	137.5
1969	151.0	137.5
1970	232.0	194.0
1971	154.0	181.6
1972	132.0	181.6
1973	120.0	181.6
1974	111.0	150.0
1975	148.0	150.0
1976	117.0	150.0
1977	125.0	150.0
1978	95.0	132.0
1979	74.0	105.0
1980	194.0	136.0

Table 3 -*Preliminary Five-Year Timber Sell Plan
Summary Volume (MMBF) by Fiscal Year

District	1981	1982	1983	1984	1985
Swan Lake RD	20.0	40.9	37.0	35.0	35.0
Spotted Bear RD	3.2	10.2	10.0	10.0	10.0
Hungry Horse RD	13.2	11.9	30.0	23.0	23.0
Glacier View RD	26.4	16.6	28.0	22.0	22.0
Tally Lake RD	72.2	55.4	25.0	20.0	15.0
Forest Total	135.0	135.0	130.0	110.0	105.0

*This preliminary plan is subject to change in January 1981. The important matter is the general showing of volume trends expected from each Ranger District.

Table 4 was taken from the Montana Renewable Resource publication (1) prepared in 1976. The only purpose of this table is to show how the Flathead National Forest compares in timber output to other Forests in Montana. Obviously it is one of the top three timber producing Forests.

Table 4 -*Comparison of Annual Allowable Harvest and Potential Yield for National Forests in Montana (MMBF)

National Forest	Annual Allowable Harvest (1/1/73)	Potential Yield (7/1/74)	Program Harvest FY75
Beaverhead	65.4	59.9	30.0
Bitterroot	53.2	63.7	46.0
Custer	10.4	10.4	4.0
Deerlodge	49.0	64.0	21.0
Flathead	181.0	146.3	135.0
Gallatin	48.0	44.7	28.0
Helena	32.7	29.9	13.7
Kootenai	200.4	328.8	250.8
Lewis & Clark	40.4	23.2	15.2
Lolo	191.7	188.8	150.0
Total	872.8	958.7	693.7

*Table 4 shows recent allowable harvest and potential yield levels in Montana National Forests. The annual allowable harvest is shown as of Jan. 1, 1973, as is the new potential yield for July 1, 1974. The potential yield shows the Forest Service's estimate of what can be harvested at current management levels. The program harvest is the amount of timber planned for sale during the current year.

3. TRANSPORTATION SYSTEM

Road construction on the FNF has occurred over a long period of time and at many different levels of quality. Since appropriated funds were difficult to obtain, timber stumpage usually paid for construction and route locations usually favored the highest valued stands. Today that problem has essentially been corrected. Transportation planners carefully plan a road system and determine the road standards needed. Other engineers complete the survey, design and inspection of the actual construction.

In 1979 the estimated miles of system roads on TLRD was 656 miles. In response to the MPB program and the accelerated timber program an estimated 300 miles (16) of new roads will be added in the next three-year period. A summary made in October 1980 indicated that during FY80 alone, 69 miles of existing road will be reconstructed and 116 miles will be constructed.

4. POPULATION

Flathead County is experiencing a marked surge in the rate of population growth. In 1970 the County census indicated a 39,460 population. By 1980 the County increased 30%, or to 51,460 people (17). That growth rate is considered highly unusual. Probably it relates to the expanding timber industries and the increased production at the Anaconda Aluminum Company at Columbia Falls, Montana. Growth beyond 1980 will be determined by the availability of full time non-seasonal jobs.

A more remarkable shift is that 50% of the County population is living in rural areas (see Table 5). This situation has only shown up in the last five-year period. At the same time the County population is shifting more to the middle-age people. Perhaps people in general are avoiding the pressures of city living and find the rural areas clean and healthy. Many older middle-age people find the recreation aspects and the beautiful scenery surrounding the Flathead a most pleasing place to live and retire.

Table 5 - Population of Flathead County, 1980 Census

	City	Jurisdictional Area*
Columbia Falls	3,070	6,378
Whitefish	3,478	7,153
Bigfork	1,010	3,949
Somers	454	1,158
Hungry Horse	672	1,959
Kalispell	10,213	21,031

*Jurisdictional areas are those rural areas around a city where the residents will most likely visit or use that city.

The Montana Department of Community Affairs has calculated several population projections for Flathead County (4). Table 6 and Table 7 show the State's projections using the assumptions of a 25 percent and a 50 percent increase in migration during 1970 to 1980

Table 6 - Population Projection for Flathead County
Assumption: 25% Increase in Net Migration
For 1975 and 1990.

Age Group	1975	1990
0-24	20,107	28,256
25-44	9,798	19,860
45-64	8,515	10,819
65+	4,502	6,154
Total	43,922	65,089

Table 7 - Population Projection for Flathead County
Assumption: 50% Increase in Net Migration
For 1975 and 1990.

Age Group	1975	1990
0-24	20,564	30,942
25-44	10,994	22,041
45-64	8,563	11,438
65+	4,539	6,342
Total	44,660	70,763

Table 8 applies the Montana Department of Community Affairs assumption to the jurisdictional area. Growth will continue perhaps not at the 30 percent level, but most likely at the 25 percent level (17). At the same time growth in the cities will continue to be surpassed by rural growth.

Table 8 -*Estimate of Future Population Using D.C.A. Migration Assumptions

AREA	1980	1985	1990
25% Increase in Migration			
Kalispell Jurisdictional Area	21,463	24,545	28,183
Kalispell City Limits	(11,740)	(13,426)	(15,416)
Whitefish Jurisdictional Area	7,039	8,049	9,243
Whitefish City Limits	(3,766)	(4,306)	(4,945)
Columbia Falls Jurisdictional Area	5,750	6,575	7,550
Columbia Falls City Limits	(3,318)	(3,794)	(4,356)
Flathead County Jurisdictional Area	15,316	17,516	20,113
TOTALS	49,568	56,685	65,089
50% Increase in Migration			
Kalispell Jurisdictional Area	22,294	26,084	30,640
Kalispell City Limits	(12,195)	(14,268)	(16,760)
Whitefish Jurisdictional Area	7,311	8,554	10,048
Whitefish City Limits	(3,911)	(4,576)	(5,376)
Columbia Falls Jurisdictional Area	5,973	6,988	8,209
Columbia Falls City Limits	(3,446)	(4,032)	(4,737)
Flathead County Jurisdictional Area	15,910	18,614	21,866
TOTALS	51,488	60,240	70,763

*The population of Flathead County has increased more in the last six years than it did over the entire 20-year period from 1950 to 1970. This growth occurred despite a major recession and energy shortage, which created severe unemployment within the County. It is evident that if the economy continues to recover, it will in turn trigger additional in-migration and growth. Barring a major depression, the population of the County will continue to grow at a relatively fast pace. The above table shows an estimate of future growth.

5. FLATHEAD RECREATION

The Flathead area has developed into a principle outdoor recreation area. Its scenic beauty and primitive surrounding, its closeness to Glacier National Park and numerous lakes offer a wide variety of yearlong recreation activities. Table 9 lists the Special Interest Areas and the general recreation on the Flathead National Forest.

Table 9 - Recreation Summary, Flathead National Forest

Special Interest Areas

Bob Marshall Wilderness Areas (+240,000 acres adjoining in Lewis & Clark National Forest)		709,886	acres
Mission Mountains Wilderness		73,871	acres
Great Bear Wilderness		285,771	acres
Flathead Wild, Scenic and Recreation River		35,000	acres
Coram Experimental Forest		7,460	acres
Jewel Basin Hiking Area		14,961	acres

Recreation

Campgrounds		24	
Picnic Areas		11	
Capacity at one time		2,175	
Boat Landings		11	
Swimming Sites		8	
Summer Homes (under Special Use Permits)		66	
Recreation Resorts (under Special Use Permits)		7	
Observation Sites		2	
Commercial Packer Camps - Wilderness Areas (under Special Use Permits)		45	
Winter Sports Areas (under Special Use Permit) (Big Mountain - 1,500 acres - 210,000 visitor days)			
Hunting Area - Gross Flathead National Forest - Not all open		2,628,363	
Fishing: Lakes	Approx.	43,506	acres
Streams	Approx.	3,000	acres
Average Visitor Day		791,200	

The FY81 tentative budget advice gives a rough picture of how recreation funds were distributed in Region One. What is quite obvious is the FNF is a very significant recreation oriented area. If it were not for combining three National Forests to form the Panhandle NF, the FNF would be in the number one position.

Table 10 - Distribution of Recreation Dollars; Forests in Region One for FY81.

NATIONAL FOREST	M/DOLLARS	PERCENT	PRIORITY
Beaverhead	276.0	.056	9
Bitterroot	308.0	.063	8
Panhandle*	726.0	.149	1
Clearwater	391.0	.080	4
Custer	269.0	.055	10
Deerlodge	225.0	.046	12
Flathead	631.0	.126	2
Gallatin	506.0	.103	3
Helena	184.0	.037	13
Kootenai	260.0	.055	11
Lewis & Clark	368.0	.075	6
Lolo	396.0	.080	5
Nez Perce	557.0	.075	7
	4907.0	100%	

*The Kaniksu, St. Joe and Coeur d'Alene National Forests were combined to make the Panhandle National Forest.

More specifically the recreation situation on the FNF is best summarized by John Emerson's letter (18) to the Regional Forester reflecting on recreation funds for FY81:

"The Flathead is revising the FY81 recreation funding needs previously identified in Advent because we have concluded the funding levels presently in the system are for the most part far less than adequate.

In order to comprehend the recreation funding needs of Flathead National Forest, it is necessary to have a general understanding of the magnitude and complexity of the Forest's recreation estate, the associated management responsibilities and the significance of some Flathead recreation resources within the context of national and Region One importance.

In 1964, Congress passed P.L. 88-577 establishing the National Wilderness Preservation System. Since that time, the System has grown to approximately 19 million acres, of which 15 million are in the National Forest System. The Flathead National Forest encompasses 1,069,933 acres of Wilderness, or 6% of the total National System and 7% of the system administered by the U.S.F.S. We manage 24% of Region One Wilderness. Flathead Wilderness provides 141,700 visitor days or 15% of the Region total. In FY79, Flathead districts had $70,000 to manage this significant portion of the nation's recreation estate at an expenditure of $0.49/visitor-day. Over 50% of Great Bear and Bob Marshall users spend more than $20 on their visits (Lucas, 1979).

The Flathead contains 1,463 miles of trail in Wilderness. The miles of trail in Wilderness are particularly noteworthy because of the cost of their maintenance. This cost far exceeds average trail maintenance costs because chain saws cannot be utilized and because of the travel time and logistics support necessary to maintain trails in the interior of such an expanse of Wilderness; i.e., the Great Bear/Bob Marshall. Additionally, according to Lucas, 42% of the Great Bear use and 59% of the Bob Marshall use is by horseback. This is the highest horseback Wilderness use in Region One! The additional maintenance cost burden we bear because of this horse impact, both in designated Wilderness and at trail heads, and on trails leading to Wilderness, is self-evident. Of the 900 ± miles of Wilderness trail for which Spotted Bear Ranger District is responsible, the District could only open 468 miles of main line trails this season. This further compounds maintenance costs on those trails by concentrating use to a restricted portion of the total network. Spotted Bear could do heavy maintenance on only 53 miles. An additional factor that reflects on our Wilderness/trail management costs is that, according to Lucas, 34% and 43% of Bob Marshall and Great Bear use, respectively, is due to hunting. This hunting and associated outfitter impact greatly compounds the magnitude of management needs over a longer use season. This is the highest Wilderness hunting use in Region One. The next highest is the Selway-Bitterroot, which has 16% hunting use and 20% horse use - far below Flathead percentages.

The Wild and Scenic River System has only grown from 800 miles to 2,343 miles in the 12 years since enactment of the Wild and Scenic River Act. There are now 27 river segments in 22 states. The 219 miles of the Flathead Wild and Scenic River comprises 9% of the National System miles, and 38% of all Region One Forest Service-administered Wild and Scenic River corridor acres. Again, the Flathead National Forest has stewardship responsibility for a major portion of a national recreation resource

system. In FY79, the Flathead had $15,500 funded for the administration of the Flathead National unit of the National Wild and Scenic River System.

The Flathead contains 2,282 miles of trail, including the 1,463 miles in Wilderness and 35 miles in Jewel Basin, a 15,349-acre alpine lake area specially designated and managed for back country hiking. We have six National Recreation Trails (NRTs) which compreses 43% of all Forest Service-administered NRT's and 24% of Region One NRT's. We have 25 miles of managed cross country ski trails and, in cooperation with Montana Department of Fish, Wildlife and Parks, we provide 67 miles of groomed snowmobile trails.

We have recreation management responsibility for the 23,750-acre Hungry Horse Reservoir. This resource accommodates seven picnic areas, 11 campgrounds, eight boat launches and three swimming areas. Other developed facilities throughout the Forest consist of 12 campgrounds, seven picnic areas, three swimming and five boat launch areas. Our seasonal capacity for developed sites is 423,965 PAOT days. The Flathead also provides the resource base and has major management responsibilities for the Big Mountain Ski Area. This facility accommodates 210,000 skier days during the winter season and 10,000 lift users during the summer. It ranks second in capacity and first in number of visits among the 16 regional ski areas. Big Mountain visits are twice that of Big Sky. Big Mountain ranks nationally among the top 25% in number of skier days.

This description of the Flathead's recreation resources is not inclusive and does not begin to address unmet potential. However, it does provide a broad overview of what our present management responsibilities are. It is difficult to convey the magnitude, diversity and complexity that these management responsibilities entail. However, we are grossly underfunded to meet these responsibilities. In FY79, we were allocated $265,763 for recreation and $223,091 for trails. This funding constituted 8% of the total Forest P&M budget and 3% of the FR&T funds, or 2% of the $11,160,000 total Forest appropriated funds. These funding levels and those previously entered in FY81 Advent System are completely inadequate to manage the recreation resources for which the Flathead is responsible."

Since the Flathead already has a significant recreation estate and is poorly funded, the possibility of planning and developing new areas can only be considered remote. TLRD in many respects, falls even lower in demands since the more nationally recognized activities, such as Wilderness, hiking areas, Wild and Scenic Rivers, will obviously receive more attention.

6. OIL AND GAS LEASING

The FNF currently has an estimated 15,035,000 acres under lease application for oil and gas exploration. Map 3 displays the distribution of leases. The earliest applications have been pending since 1974.

About 304,000 acres are within designated Wilderness and 7,400 acres are within the Coram Experimental Forest. The remaining 723,000 acres under application are scattered throughout the Forest with some applications on each Ranger District.

TLRD has only recently been included in oil and gas leasing. Texaco Inc., Phillips Petroleum Co. and Emery Coal Inc. (see Table 11) made lease requests in late 1977 and early 1978. To date no exploratory work has occurred. Mark Weber, Forest Geologist, felt that TLRD is a marginal area and the risk of early activities is very low. If something more positive is discovered in the surrounding areas then exploratory work will most likely occur on district lands at a very rapid rate.

Table 11 - Oil and Gas Leases, Tally Lake Ranger District
District Files - 12/16/80

Lease Holder	Date Applied
Emery Coal Inc.	April 24, 1978
Phillips Petroleum	March 28, 1978
Texaco Inc.	December 9, 1977

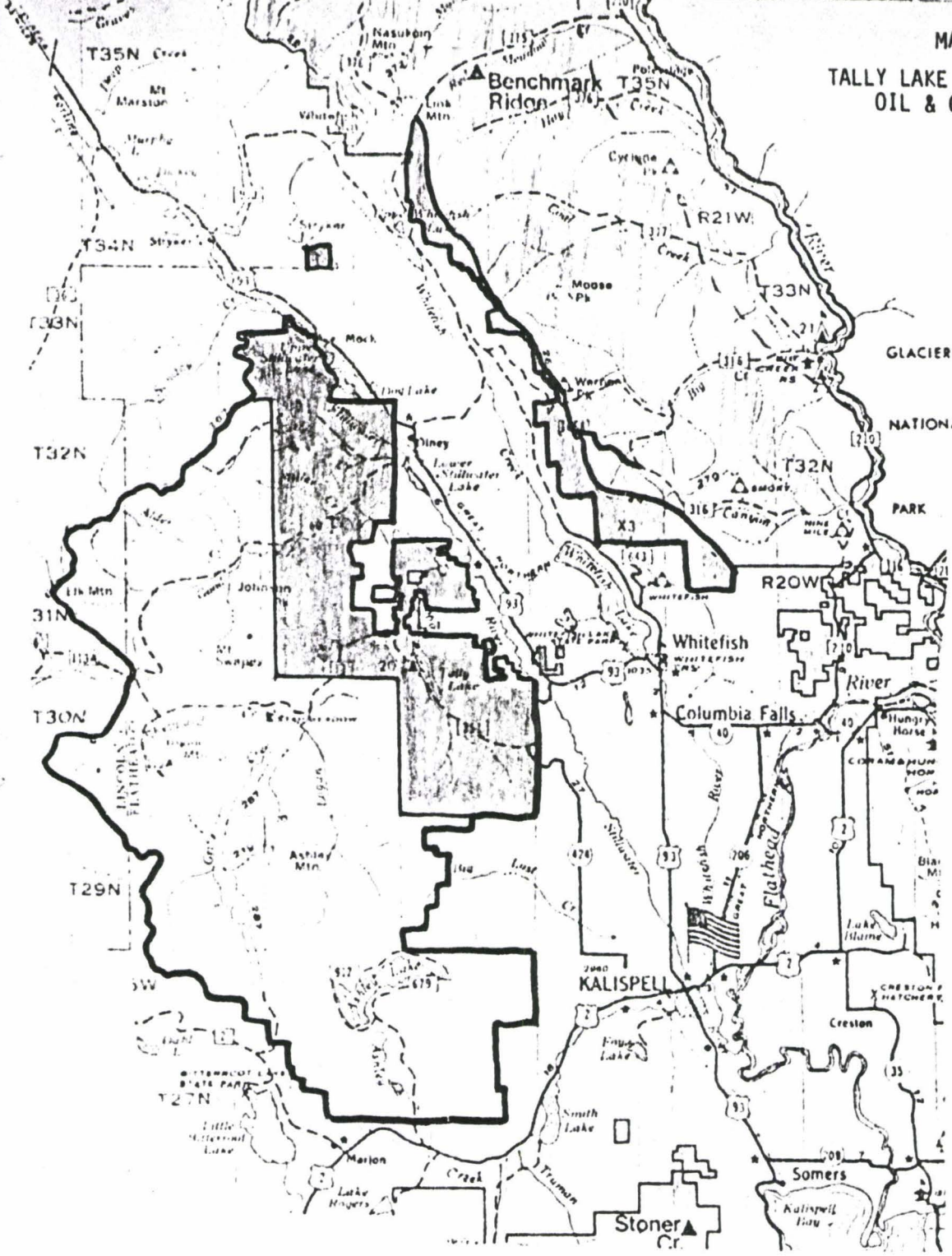
There are many significant internal, as well as external pressures facing the land manager. The luxury of time is fast fading as an ally to recreation planners. Professional recreation planning and decision-making are needed now, otherwise better funded and more pressing activities will take precedence over the best interest of a quality recreation attribute.

Most of the concerns discussed are reasonably understood. Managers can, to some degree, cope with them provided the expertise in recreation is available. The least understood concern is the population trends and the unknown impacts that might arise if oil and gas become a significant issue of the FNF.

The next section involves a more indepth review of Tally Lake Ranger District.

MAP 5

TALLY LAKE RANGER DISTRICT
OIL & GAS LEASES



B. OVERVIEW OF TALLY LAKE RANGER DISTRICT

1. PHYSICAL DESCRIPTION

Tally Lake Ranger District is one of five districts making up the Flathead National Forest. It encompasses 229,859 acres of the Sub-alpine Forest Zone. Most of the upland is covered with a wide variety of conifer species, while the riparian zones are mixed conifer and deciduous species. Mountain parks and open grown forest types are limited or lacking.

Elevational differences range between 3100 feet at Bowser Lake to a high of 7400 feet on Whitefish Mountain. The estimated average elevation is closer to 4500 feet. The high mountain peaks common along the Whitefish Mountain Ranger are the exception rather than the rule.

Temperatures are quite variable. For all practical purposes temperatures used in the Logan Planning Unit EIS (5) are representative of the District. The range is from a mean maximum of 28°F (-2°C) to a mean minimum of 12°F (-11°C) in winter to a mean maximum of 81°F (27°C) to a mean minimum of 48°F (9°C) during the summer.

Rainfall averages between 20" to 30" each year with the majority occurring as snow. Snow usually covers the ground from early November unti May or early June. Generally weather conditions are more moderate than what is common on other districts on the Flathead.

Comparing land form with other districts illustrates the greatest difference. Swan Lake, Spotted Bear, Hungry Horse and Glacier View Ranger Districts are characterized by long narrow valley bottoms, bordered by high rugged mountain ranges. Each valley bottom has been scoured by glaciation during the last ice age, approximately 10,000 years ago. TLRD is bordered on the east by the spectacular Whitefish Mountain Range. West and south of this range the land form changes to more gentle mountains with wide flat valley bottoms. Past glacial activity is credited with much of the mellow-ing of the once steeper mountains. Where ice scouring was heaviest, bedrock was exposed which provides for some interesting and unusual settings. As mentioned earlier, forest now covers the land; however, where soils were moved or greatly reduced, growth potential has been reduced to less than 50 cubic feet per acre per year, a marginal area for timber management.

2. LAKES

As a result of past glacial activity, lakes are a very common and attractive feature throughout the District. Table 12 lists the larger lakes. There are over seventy-five lakes with thirty carrying a viable fishing population.

The larger lakes provide a wide range of recreational opportunities from fishing, boating, camping, water skiing, and, in the private sector, homesites. On weekends a large number of people vacate the cities for a pleasant day around one of the many lakes.

Table 12 - Major Lakes of Tally Lake Area - National Forest, State of Montana, and Private Ownership.

Lake	Ownership F.S.	State	Pvt.	Area
Ashley Lake	X	X	X	2881
Duck Lake	X	X	X	57
Tally Lake	X			1211
Upper Stillwater	X	X	X	598
Middle Stillwater	X	X	X	78
Lower Stillwater		X	X	254
Whitefish Lake		X	X	3350
Bitterroot Lake	X	X	X	2925
Upper Whitefish		X		88

3. TIMBER MANAGEMENT AND THE MOUNTAIN PINE BEETLE EPIDEMIC

The Mountain Pine Beetle action plan (3) has and will continue to have a tremendous impact on TLRD. Essentially all of the unmanaged lodgepole pine stands will be developed or programmed for development by 1982. In 1981, studies have been initiated to determine what portion of the remaining lodgepole pine volume can be harvested prior to the beetle epidemic. The most likely direction will be that a portion of the remaining 160 MMBF would be harvestable. What is remaining after that will probably be attacked and killed by the beetles.

Table 1 forecasts the beetle epidemic that TLRD will undergo. Field observations during the 1980 summer season indicated new attacks and enlargement of 1979 infestation. There are a few non-believers who feel the Mountain Pine Beetle epidemic may not materialize. There beliefs are completely contrary to past history. When the host trees meet the high risk criteria, especially in the numbers found on TLRD, the anticipated epidemic is inevitable.

Harvesting of the first 160 MMBF may have a controlling effect on slowing or possibly stopping the epidemic. If that happens, the land managers

may have more time to remove high risk volume while it is still alive. That situation exists, provided the volumes sold during the three-year accelerated program are harvested. With market conditions very sluggish and the prime interest rate very high, it is doubtful that control by harvesting is plausible.

Before leaving the subject of timber harvest, a more subtle concern should be evaluated. What the accelerated sell program is actually doing is removing a six-year volume in three years. The emphasis is on the lodgepole pine. Even with careful planning it is impossible to silviculturely harvest only a single species since under natural conditions, mixtures do occur. Residual fire resistant old growth trees still occupy space in the even age lodgepole pine. When plans are made to prepare planting sites, reduce slash or build roads, other species will also be harvested.

This situation creates the planned harvest of 160 MMBF of lodgepole pine, but another 40 to 50 MMBF of other species will also be removed. Considering the planned yearly harvest is about 30 MMBF, a regular seven year harvest will occur in three years.

The second half of high risk lodgepole pine occurs more in mixed stands. Harvesting then would result in a higher percentage of other species being removed.

4. WILDLIFE

Like most Ranger Districts in Region One, wildlife is an important and sometimes complex resource management problem. Management is shared between the State of Montana, who is responsible for the wildlife, and the Forest Service, who manage the wildlife habitat. Obviously both agencies overlap in their management responsibility. Table 13 provides a summary on where the more important game species are found on the FNF. One should also realize that the specific numbers are not an exact figure but serve as an indicator of where wildlife populations are found and their relative importance.

TLRD has never received the attention an area would have if the elk were a major species. That particular species is the prize most sought by Montana sportsmen and by many out-of-state hunters. But when reviewing the relative importance of all big game animals on the FNF, TLRD is first in moose population, second in whitetail deer and mule deer population, and third highest in black bear population. In a very subtle way these features attract a significant hunting population each fall.

Winter range is a key concern for most game animals. With the human population increasing and a general shift of people to a rural setting, the winter range is and will continue to be a scarce commodity. Some of the

of the more desirable rural sites are in or near the wintering area for the important wildlife on TLRD.

Small game and non-game animals should not be ignored. Their presence and importance are gradually being recognized by land managers. Recently a snag management policy has been initiated that recognizes snags as important habitat for hole nesting birds. Fur-bearing animals such as the martin fisher, otter, wolverine, lynx, mountain lion and beaver, as well as a wide variety of birds, both local and migratory, are important inhabitants in the forest lands.

Table 13 - Annual Wildlife Report (7), Number of Animals by Ranger District Flathead National Forest (10/3/80)

	Swan Lake RD	Spotted Bear RD	Hungry Horse RD	Glacier View RD	Tally Lake RD
Whitetail deer	3240	655	760	835	2540
Mule deer	500	1025	340	375	750
Black bear	560	760	500	910	590
Moose	40	80	10	120	220
Elk	570	1950	840	533	230

5. THREATENED AND ENDANGERED SPECIES

According to the Endangered Species Act of 1973, the FNF has recognized the grizzly bear, gray wolf, bald eagle and the peregrine falcon as endangered species found in the local area. On TLRD only the bald eagle is a yearly inhabitant with only occasional sightings of grizzly bear. The gray wolf and perigrine falcon have not been sighted. (Appendix B)

6. FISHERIES

Fishing is without a doubt one of the most popular sports in the Flathead area. That fact should be obvious when considering the number of lakes, miles of rivers and streams, and the wide variety of fish species. A very conservative estimate of fishing streams on Tally Lake Ranger District is 220 miles. A composite list of some native and introduced fish is shown in Table 14 (8).

Table 14 - Some Native and Introduced Fish Species in the Flathead River Drainage.

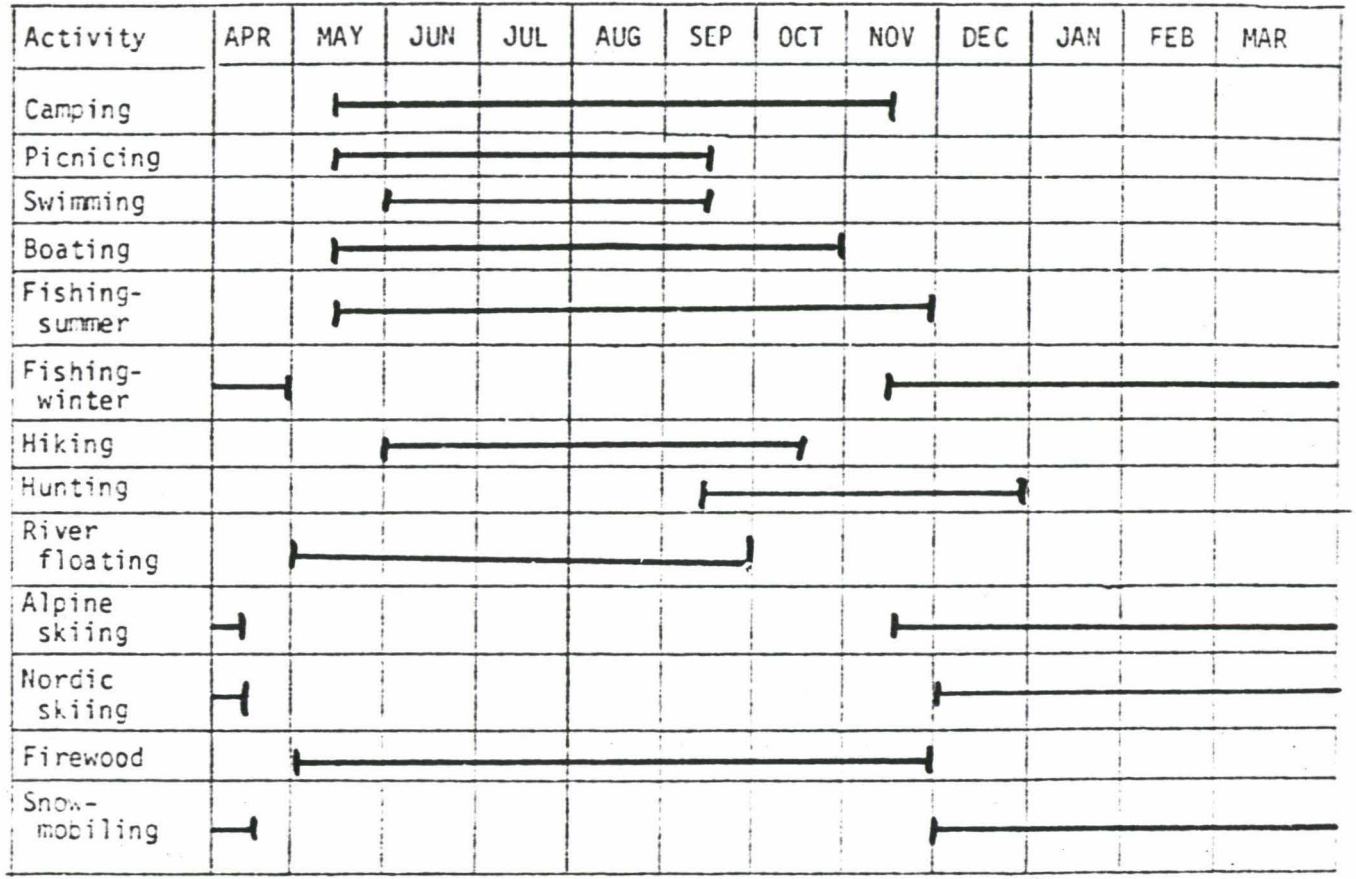
Common Name	Scientific Name	Native(N) or Introduced(I)	Game or Non-game
Cutthroat Trout	Salmo clarki	N	game
Dolly Varden	Salvelinus malma	N	game
Mountain Whitefish	Prosopium williamsoni	N	game
Pygmy Whitefish	Prosopium coutteni	N	game
Rainbow Trout	Salmo gairdneri	I - 1914	game
Eastern Brook Trout	Salvelinus fontinalis	I - 1912	game
Grayling	Thymallus arcticus	I - 1913	game
Kokanee Salmon	Oncorhynchus nerka	I - 1935	game
Golden Trout	Salmo aquabonita	I - 1905	game
Lake Trout	Salvelinus namaycush	I - 1905	game
Lake Whitefish	Coregonus clupeaformis	I - 1909	game
Largemouth Bass	Micropterus salmoides	I	game
Smallmouth Bass	Micropterus dolomieui	I	game
Northern Pike	Esox lueius	I	game

7. RECREATION

Recreation is a rather difficult resource to define and to compare. It appears that if it isn't trees or cows, it's probably recreation. Obviously that is an over simplification of recreation. When it comes to recreation on the National Forest berry picking, firewood cutting, rock climbing, bird watching, hunting, fishing, boating, hiking, or just plain setting and meditating, are only a few of the more common activities. With such a wide diversity of activities it is a small wonder that recreation is such a difficult resource to understand from a management point of view.

Tally Lake RD provides a strong yearlong recreation experience. Table 15 depicts, by month, the more important recreation activities and their approximate duration. It was not too long ago that recreation ceased during the winter months and most people stayed within the confines of the cities. Now, with a much larger and younger population, more leisure time, better roads, etc., the recreationist is finding a challenge in the forest during all seasons of the year. What the future has in store for our recreation specialists, only time will tell.

Table 15 - Recreation Use Patterns by Month.



Following is a brief summary of recreation by winter and summer activities that occur on TLRD.

a. Winter. Winter recreation occurs during that period of time when snow and ice conditions become suitable for recreation use.

(1) Alpine Skiing. Big Mountain Ski Area is a nationally known ski area, drawing skiers from all over the United States and Canada. The area is serviced by four chair lifts with a vertical rise of 2145 feet. Last year (1979-1980) over 240,000 skier days were recorded during the winter operating season.

(2) Nordic Skiing. Nordic skiing is building in popularity. Lift lines and cost of lift tickets contribute to a surge away from Alpine skiing to cross country skiing activity. In 1978, Tally Lake RD developed the Round Meadows Cross County Ski Area. It contains 28 kilometers of groomed trails. Use is slowly building and within a few years this area will be a well known area in the Flathead.

(3) Northwestern Montana Avalanche Warning System. A new public service avalanche warning system is now effective in northwestern Montana. The reporting information is received from Big Mountain Ski Area, Glacier National Park, Montana Highway Department and Burlington Norther Railroad. The result is a weekly advisory to help weekend travelers avoid hazardous avalanche situations.

(4) Snowmobiling. Snowmobiling is a very active recreation activity. There are no improved trails; however, most travel occurs on Forest roads. A very large portion of this activity occurs on National Forest lands.

(5) Ice Fishing. As soon as ice becomes firm enough to hold a person, ice fishing season begins. Most fishing occurs on the larger lakes. All game species are caught.

b. Summer. Summer activities are those that seem to follow after more mild weather conditions begin.

(1) Picnicing. Picnicing is a very popular activity and most often occurs at one of the district's campgrounds. The north shore of Tally Lake is highly desirable but primarily from a dispersed nature. There is a demand for more and better designated family type picnic sites.

(2) Camping. This is also a very popular activity, but generally confined to developed campgrounds. Tally Lake Campground provides 34 sites with overnight capabilities. Three other campgrounds are available but with limited overnight camping potential.

(3) Hiking. With the addition of six National Recreation Trails in 1980, and another one nominated for 1981, hiking will become a very important recreation outlet. At this time TLRD has more National Recreation Trails than any other district in Region One. There are more opportunities to add new trails and to improve the existing ones.

(4) Boating and Fishing. Boating is usually connected with fishing. With the large number of lakes on TLRD, this activity is understandably very popular.

(5) Float Trail. In 1979, a 13-mile float trail was recognized. It covers about nine miles of calm waters and three miles of whitewater. Floating is becoming a major recreation activity. Most of the larger rivers are already being floated (by raft or canoe). Small areas such as the Stillwater Float Trail are slow to be recognized but will become very popular day use areas.

(6) Hunting. With our hunting population and the wide variety of game animals, big game hunting is another very active sport. Almost the entire district is hunted for a period of one to two months each year. Camping follows this activity as well as wood cutting.

Table 16 shows how the recreation and trail funds for the FNF were distributed during fiscal year 1981. Spotted Bear, Hungry Horse and Swan Lake Ranger Districts each administer a Wilderness area, or a portion thereof. Glacier View Ranger District is now administering a sizeable portion of the Flathead Wild and Scenic River.

Table 16 - 1981 Recreation & Trail Budget by Ranger District

	Swan Lake RD	Spotted Bear RD	Hungry Horse RD	Glacier View RD	Tally Lake RD
Recreation	$64,800	$99,100	$82,500	$54,800	$40,000
Trails	$40,500	$126,600	$59,600	$30,000	$15,200

8. OWNERSHIP

The gross area of TLRD is 295,358 acres while the net area of National Forest land is 229,859 acres. The remaining land, 65,499 acres, is private or State of Montana. The southern area of the district is a block type ownership (alternating sections) with the major owner being Burlington Northern, Inc.

C. RECREATION DEMAND CRITERIA

The preceding section attempted to define the overall atmosphere that surrounds TLRD. It should be quite obvious that those outside forces — Mountain Pine Beetle, timber harvesting, road construction, etc. — will greatly effect the recreation estate of the future. Now is the time to look closer at what the criteria is for recognizing and planning recreation and to compensate for changes that cannot be avoided.

1. FOREST SERVICE RECREATION ROLE

Compared to otner Federal land management departments, the Forest Service land receives the greatest public recreation use. A report to congress in 1978, summarized that recreation on National Forest lands amounted to 51.1% (925 million visitor days) (9). Table 17 shows the relative importance of each agency. The Bureau of Land Management administeres the largest land mass but since much of it is in Alaska and essentially isolated from large populations, actual recreation use is very low. The Forest Service lands, on the other hand, are closer to population and obviously, use is quite high.

The future role of Forest Service land in meeting recreation needs will be a very complexing challenge. Obviously what is planned must be carefully studied and responsive to the real public needs. For example, concerns should consider the following questions:

(1) Will developed sites on National Forest land compete with more cost efficient sites in the private sector?

(2) Is the proposed recreation activity compatible with other resource values?

(3) Is the planned activity the lowest cost over the long-run from a management and use prospective?

(4) Are we responding to population needs and age class distribution?

(5) Are activities responding to the handicapped?

If these questions can reasonably be evaluated then the recreation planner can, with a much higher degree of success, project recreation activities for the future.

Table 17 - Visitation to Federal Recreation Management Units.

Agency	Fee & Non-fee Management Units		
	Recreation Days (M)	Percent	Acres Administered
Bureau of Land Mgmt	73,572.0	4.1	474 million
Bureau of Reclamation	69,889.0	3.8	no entry
Corps of Engineers	437,442.1	24.2	54 million
Fish & Wildlife Service	7,016.8	.4	28 million
Forest Service	924,835.5	51.1	187 million
National Park Service	276,998.3	15.3	27 million
Tennessee Valley Authority	20,122.0	1.1	900 thousand
		100%	

In 1974, Congress enacted the Forest and Range Renewable Resource Planning Act (RPA) which directed the Secretary of Agriculture to periodically assess the Nation's forest and range land resources and to submit at regular intervals, recommended long range Forest Service programs. The first program in 1975 recommended increased supplies of outdoor recreation with strong emphasis on dispersed recreation. Developed recreation sites were not to be ignored, but should be added as necessary and maintained at a high quality standard.

The 1980 RPA (19) updates the 1975 assessment as follows: "The Forest Service will continue current recreation policies which emphasize dispersed recreation while continuing to provide developed recreation on National Forest System lands. New emphasis will be placed on energy efficiency in recreation use and development by making recreational opportunities on National Forest System lands more accessible, usable and enjoyable for urban residents."

The direction established by the 1980 RPA will serve as a guiding philosophy for the Forest Service. That philosophy is exceptionally palatable to TLRD since there is an ample supply of dispersed recreation opportunities in close proximity of existing developed recreation sites.

Definitions for developed and dispersed recreation:

a. Developed recreation is defined as a site where use is attracted to a specific area. Campgrounds, alpine ski areas, VIS centers, picnic areas are some examples.

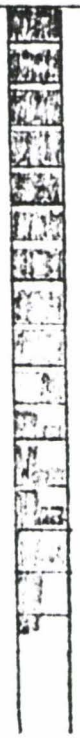
b. Dispersed recreation is defined as areas or activities which cause a dispersion of people and use. Wilderness, trails, hiking areas, river floating, cross country skiing and driving for pleasure are examples.

2. RECREATION PRIORITIES

There are many current studies that indicate a wide array of recreation opportunities for the American public. On a national basis, Table 18 attempts to look at all National Forest lands and provide a priority for allocating these lands to furnish a specific recreation attribute. This table is a very good point of reference; however, the planner should recognize that in a more specific area, not all of these opportunities are possible. It should also be recognized that the national direction has supported the direction used in the 1980 RPA assessment.

Table 18 - Priorities for Recreation Efforts by the Forest Service (10).

Area, Facilities and Activities	Allocation of National Forest Lands
1. Wilderness	
2. Wild and Scenic Rivers	
3. National Recreation Areas	
4. Back Country	
5. Driving for Pleasure	
6. Facilities for Dispersed Recreation	
7. Trails	
8. Hunting and Fishing	
9. Alpine Skiing	
10. Interpretation of Natural Resources	
11. Interpretation of Cultural Resources	
12. Off-road Vehicle Activities	
13. Organized Camps	
14. Destination Campgrounds	
15. Day Use Sites	
16. Destination Campgrounds for External Attraction	
17. Campgrounds for Through Travelers	
18. Urban Recreation Facilities	



KEY:

Table 19 displays the recreation use for fiscal year 1979, as it occurred in the Northern Region. It is perhaps a little surprising that mechanized recreation use is rated in a number one position. In 1979, the energy dilemma was really a major issue. While total recreation use in Region One grew about 20 percent from 1975 to 1979 (20) mechanized recreation travel grew only half that fast. The energy crunch is slowly effecting the recreating public.

Table 19 - Recreation Use by Activity - FY 1979 (20), Northern Region.

RANK	THOUSAND VISITOR DAYS	ACTIVITY
1	3034.8	Mechanized recreation travel, auto & motorbike
2	2607.5	Camping
3	1192.0	Hunting
4	933.2	Fishing
5	628.4	Winter Skiing
6	558.2	Hiking & mountain climbing
7	521.8	Picnicing
8	396.4	Boating
9	354.3	VIS
10	327.0	Horseback riding
11	295.2	Recreation residency use
12	269.4	Gathering forest products

Since the Forest Service is promoting a more energy efficient form of recreation we can expect: (1) a longer stay at recreation sites, (2) a decrease in day use at more distant destinations, (3) increased impact and use levels at areas adjacent to population centers, and (4) a definite decline in high energy use forms and styles of outdoor recreation.

Table 20 lists the ten most popular recreation preferences recognized in the State of Montana. Since this study was published in 1976, the full impact of energy had not materialized. It should also be noted that tourism in Montana has been a significant economic benefit, especially in

communities near National Parks and National Forest lands. One study by Davidson-Peterson Associate, Inc., of New York City (23) referred to a $900 million-dollar a year tourist industry in Montana. What this indicates is a substantial impact will occur to tourism if energy continues to be a scarce commodity. Tourists will not visit as often and will, if opportunities are provided, stay longer in one place.

Table 20 - Outdoor Recreation Preferences of Montana (1).

RANK	ACTIVITY
1	Driving for pleasure
2	Fishing
3	Walking for pleasure
4	Sightseeing
5	Hunting
6	Back country touring (auto)
7	Camping
8	Motorbike riding
9	Picnicing
10	Horseback riding

Table 20a shows the standing of developed sites in the northwest area of Montana. From past experience and demands, these four counties are a highly attractive area for camping.

Table 21 is a summary of recreational activities as seen by employees at TLRD (24). It is interesting to note that gathering of forest products is becoming a major activity since it has replaced the pure concept of driving for pleasure or sightseeing with a combination of outdoor experiences. The same is true for hunting, fishing or camping. Other activities are combined to better justify the expense of a single experience.

Table 21 matches very closely with the Northern Region and the State of Montana (Tables 19 and 20) projection. The ranking varies simply because of the population demands and the land attributes. The important point is that each of these tables reflects a past demand. Internally they are changing since energy is becoming a scarce, more costly item, the younger people are looking for more physically challenging activity, and our local population is growing and searching for outdoor experiences.

The potential to expand Alpine skiing experiences is a remote possibility. Those sites are scarce, expensive to operate, and very competitive. Dispersed activities seem to be identified in abundance and probably offer the recreation planner the best opportunity for future expansion.

Table 20a - Montana's Non-Urban Developed Recreation Sites* (1)
(Number of Sites)

Ownership				
Federal	State	Local	Private, Non-Profit	Total
Counties**				
Phillips, Valley, Daniels, Sheridan, Roosevelt				
16	4	1	2	23
Garfield, McCone, Prairie, Dawson, Richland, Wibaux				
4	8	2	3	17
Treasure, Richland, Powder River, Carter, Fallon, Custer				
10	10	0	4	24
Liberty, Hill, Blaine				
1	4	2	2	9
Chouteau, Cascade, Teton, Pondera, Glacier, Toole				
16	15	1	10	42
Judith Basin, Fergus, Petroleum, Musselshell, Golden Valley, Wheatland				
4	11	0	7	22
Sweetgrass, Stillwater, Carbon, Bighorn, Yellowstone				
30	34	2	17	83
Meagher, Gallatin, Park				
37	13	0	15	65
Lewis & Clark, Jefferson, Broadwater				
40	24	0	22	86
Lincoln, Flathead, Lake Sanders				
88	43	1	44	176
Mineral, Missoula, Ravalli				
44	19	2	28	93
Powell, Silver Bow, Granite, Deer Lodge, Beaverhead, Madison				
86	28	1	25	140
TOTAL				
376	213	12	179	780

* Examples include campgrounds, picnic areas, organization sites, resorts, commercial public service sites, recreation residences, winter & water sport sites, and observation and interpretive sites.

** Counties correspond to the 12 sub-state planning districts.

Table 21 - Tally Lake Ranger District Top Ten Recreation Activities (24)

RANK	ACTIVITY
1	Alpine skiing
2	Stream fishing
3	Picnicing (developed sites)
4	Firewood, Christmas tree cutting, berry and mushroom gathering
5	Boating
6	Hunting
7	Snowmobiling
8	Camping (developed sites)
9	Lake fishing
10	Cross country skiing

3. RECREATION OPPORTUNITY SPECTRUM (ROS) (21)

The FNF is scheduled to have a completed draft Forest Plan by December 1981. The urgency of this plan has resulted in a complete Recreation Opportunity Spectrum on the entire Forest. Extracting only the TLRD acreages there is a slight discrepancy in acreage (22). For the purpose of this paper, that error is not significant.

Prim	- Primitive	7,934 acres
SPNM	- Semi-primitive non-motorized	16,394 acres
SPM	- Semi-primitive motorized	54,902 acres
RN	- Roaded natural	139,305 acres
U	- Urban	--
		231,815 acres*

*The actual acreage used for administering the TLRD is 229,859 acres. The overage is probably due to some scattered private ownership within the protective boundary of the District.

The ROS points out that Prim and SPNM areas are in limited supply and from past activities, ninety percent of National Forest land is now roaded and under some form of management. A very significant portion of SPM has been roaded during the past several years — a result of the Mountain Pine Beetle threat.

4. ENERGY

The complexities of supply and demand on energy and how it effects recreation is the subject of much research. The big motor homes and gas guzzling trucks and larger cars are giving away to small, more energy saving means of travel. High powered motor boats are being replaced by smaller, more fuel efficient boats. Other activities that require more physical effort are slowly but definitely taking a dominant place in our recreation field.

The energy future looks very grim. People have and will continue to shift to fewer long distant vacations; they will stay longer in one place and more importantly, their recreation will most likely be closer to home. The type of recreation chosen will be more economical, more physical and higher quality. Higher quality in this sense means that the individual will look carefully for the recreation experience desired.

5. POPULATION

The County population characteristics have been described in Section A-4. What are the future recreational needs expected of National Forest lands which make up TLRD? The population has expanded at a much greater rate than earlier estimated. Growth will continue at a slightly reduced rate but nevertheless, at a substantial pace. The prime market area for Montana should also enter the planning process since tourism is the second largest employer. The prime market for Montana included Washington, Oregon, northern California, Idaho, Utah, Colorado, Wyoming, the Dakotas and the Minneapolis-St. Paul areas (13).

The age class distribution, as recognized in Outdoor Recreation, A Legacy for America (11), quite simply states that recreation activities and experiences vary by age class. Those citizens 25 years or less make up 46 percent of our 1970 population estimates. These people participate in recreation with strong parental control. The older segment of that group, 18 to 25, are more independent; however, their recreation is restricted because of school obligations and, quite possibly, due to fulfilling military obligations.

The adult population, 25 to 65, accounts for 44 percent of the County's population. This group is more educated and are able to use more leisure time than the younger age groups. They have an increased desire to participate in outdoor activities and often travel some distance in order to satisfy their needs.

The older population, 65 years or older, amounts to ten percent of our population. If they enjoyed hiking, fishing, hunting, camping, etc., these interests will continue. The difference lies in the amount of physical energy available and the time required to accomplish the recreation desired.

Table 6 displays a very close relationship in age group makeup between Flathead County and the national trends. The 25-percent increase represents the expected growth rate for the next ten-year period. In summary, the young age group, less than 25 years old, amounts to 46 percent in 1975 and 43 percent in 1990. The 25-65 year age group amounts to 24 percent in 1975 and 47 percent in 1990. There appears to be a noticeable increase in the more active outdoor-oriented age group. In the 65+ age group, 12 percent are recorded in 1975 and 10 percent in 1990.

Marcin and Lime (12) elaborate in much greater detail on how population and changing age groups effect recreation projection. In their evaluation they make an indepth study on what the future will demand. The younger and more active age group (25 to 44 years of age) are exerting a strong influence on recreation planning the way it exists today. It is reasonable to assume that to continue building a recreation program that meets todays needs would grossly fall short of meeting future population needs.

At the time of their publication, the population was largely concentrated in the 15-30 year age group; a result of the "baby boom" of the 1940's and 1950's. As that age group matures there will be a rapid shift in our population structure. The number of persons in the 25-40 year age group will increase rapidly from 1970 to 1990. Between 1973 and the end of the century, the median age of our population will increase from 28 to 35 years of age. The following statement quoted from Marcin and Lime's paper best explains the trends of the future:

"Age is closely linked to recreationist's preference. One reason, of course, is that physical stamina is directly related to age. Age also serves as a proxy for other social and economic factors — discreationary income, family status and the stage achieved in one's career. It also reflects the position of an individual in the social development of the country. For example, older people grew up in a different society than younger people. Obviously, other factors also influence participation in recreation activities — income, education, amount of leisure time and life style. In addition, shortages and high cost of fuels may have a significant impact on recreation activity.

Young people have a disproportionately higher rate of participation in most outdoor recreation activities than do older poeple. The more strenuous activities are especially youth oriented — water skiing, snow skiing, horseback riding, backpacking, motorcycle riding, mountain climbing, swimming in outdoor pools, playing outdoor sports and games, etc. As people age, however, they become more selective in their preferred activities, and the percentage of people who participate within age classes decline. Of course, some older people continue to participate in most activities, but relatively few of them." (12)

Projecting recreation of the future without some platform of reference would only result in some disastrous and costly mistakes. Marcin and Lime recognized the needs of age group recreation planning and their criteria will be valuable in evaluating sites and activities for the future.

6. HANDICAPPED

In 1968, Public Law 90-480, Architectural Barriers Act, was passed. This act requires that all buildings and facilities constructed in whole or part with Federal funds must be made accessable to and usable by the physically handicapped. A recent inspection on TLRD indicated there were few, if any, design considerations that would respond to the handicapped. Most activities on the Forest land is of a dispersed nature with strong reference to the physically capable. Karen Shirer's (23) research in identifying outdoor recreation services for the handicapped shows a serious lacking of facilities in Flathead County. Except for one campground on Swan Lake Ranger District and some jury-rigged facilities in each of the district offices, the Flathead Forest is inaccessable to the handicapped.

Projected recreation on TLRD will receive careful evaluation and strong emphasis in furnishing an environment for the handicapped. Funding, however, exerts a strong influence on what activities will be supported. The evaluation process will be developed to add weighted consideration for any project that supports the handicapped.

7. SUMMARY. Criteria for determining recreation demands for the future:

a. Emphasis will be given to dispersed recreation sites or activities. A single isolated site should not receive as much emphasis as one that complements a cluster of activities or one that combined with others, provides an enjoyable travel experience. Dispersed sites that favor overnight or longer duration stays should receive more support.

b. Developed sites will not be emphasized. They will be maintained at a high quality standard. When opportunities arise to improve, expand or create a destination type experience, an Environmental Assessment will be made to determine if the opportunity is in the best public interes. Developed sites that serve multiple activities will receive higher priority than one that serves a single purpose. Also, when overnight or longer duration is feasible, that site should receive added weight.

c. Recreation activities that reflect national, regional and local needs should receive emphasis. Specialized activities or low participation activities will receive low emphasis.

d. The Recreation Opportunity Spectrum provides a general overview of land attributes on TLRD. Emphasis will be placed on selecting the activity most compatible with the land characteristics.

e. Energy is now and will continue to be a control in recreation. Fuel consumption will be estimated on a round-trip basis to reach each new site or activity. Activities that require additional fuel consumption will receive less emphasis than one that requires additional energy outlay.

f. Age group distribution seems to be the best recreation forecaster available to the recreation planner. Activities or sites that respond to a wide range of age groups will be favored over more exclusive types.

g. Activities and sites that respond to the physically handicapped individual will receive added emphasis. Existing sites should receive indepth evaluation to schedule a positive upgrading of all deficiencies.

D. SITE EVALUATION FRAMEWORK

Recreation site identification is a relatively easy process. Some are already partially developed, while others are undeveloped and used as a dispersed site. Undiscovered sites will most likely parellel past development processes and simply by observing and applying Code-A-Site inventory, these sites can be added as needed.

A much more interesting process is evaluating a cluster of recreation sites that can compliment each other. Individually, a site may not be of significant value for a recreation visit, If, however, several experiences from a common point can be combined, that site becomes more valuable. There are a number of such situations on TLRD where that philosophy can be applied.

Energy must also be included in the evaluation process. It is very improbable that recreationists would travel from Spokane, Calgary or Salt Lake City to camp on TLRD. It is possible that while visiting a more popular area such as Big Mountain Ski Area, the Bob Marshall Wilderness or Glacier National Park that a side trip to a less known campsite might be undertaken. It is also recognized that the majority of use comes from within the County. For that reason the energy concerns are calculated from the two most important collection points, Kalispell and Whitefish, Montana.

The miles per gallon estimates are extremely variable. It depends on the vehicled used, whether a trailer is towed, condition of the vehicle, the speed driven, and the type of road used. Any one situation can have a marked effect on miles per gallon.

Region One, in their energy management planning, have used 12,77 m.p.g. as a representative figure. This value is based on a wide variety of vehicles used — pickups, crew hauling vehicles, sedans, carryalls and compact vehicles — and the off pavement type mountain roads common on National Forest lands. From a planning point of view this estimate is the best available and will be used in the evaluation process.

It would appear that response to the physically handicapped is all but ignored on the Flathead National Forest. That statement is an over-simplification of the real problem. There is a very keen interest. Funding for developing new campsites are very low priority. It's all but impossible to patch together old rundown sites, let alone create something new. It is a small wonder that the existing facilities are even operational.

In the evaluation process a much higher value will be awarded to sites and activities that respond positively to the physically handicapped. When priorities are established for recreation site development, those sites that afford handicapped potential will receive more attention.

When evaluating population, age distribution is perhaps the most important criteria for recreation planning. Each age class seems to demand different experiences from the outdoor recreation complex. It is a dynamic process changing in numbers and changing in age. The "baby boom" of the 1940's and 1950's is now the dominating force in driving recreation. At this time it appears that more physical activities are sought by the more energetic young people. As they mature and start raising families it is quite possible the energetic activities will slow down and respond to things that a family can enjoy together.

The age class distribution as defined by Marcin and Lime (12) seem most applicable in applying age class to recreation demands. The evaluation then should consider each site for the particular age group it will respond to. A site or activity that fills the needs of several age classes will receive a higher value than one that meets only limited or isolated use.

Consideration should also be given to the number of users expected to participate. This obviously is a very subjective thing and must be carefully applied.

E. EVALUATION PROCESS

Each site or activity will now be evaluated on how well it relates to the Forest Service direction with emphasis on local demand, on how it rates from an energy efficiency concern, on how it relates to the age distribution and to the handicapped. A ten point system will be applied to represent the degree each area of concern responds to the element under consideration.(Table 22) For example, a "ten" rating would indicate a very high degree of concern or compatibility. A "one" would indicate a very low concern or possibly an uncompatible situation.

Table 22 - Conditions for the "Ten Point Rating System.

1 2 3	4 5 6 7	8 9 10
-Doesn't satisfy F.S. direction.	-Meets F.S. Recreation direction.	-Meets F.S. Recreation direction.
-Doesn't fully satisfy local demand.	-Meets local demand.	-Meets local demand.
-Falls outside of ROS setting.	-Doesn't fully meet regional or national demands.	-Provides for regional or national demand.
-Responds to only one age class and only at a very low level.	-Fits at least a related spectrum class.	-Fits the appropriate ROS setting.
-Does not provide for the handicapped.	-Energy efficient: public, adm.	-Energy efficient.
-Is not energy efficient.	-Responds to some physical handicaps — those with crutches, braces, or the blind.	-Fits a wide range of age classes.
-Is contrary to other resource management objectives. Not capable of regulation to reduce impacts.	-Only slightly compliments other recreation activities.	-Responds to all types of physical handicaps.
	-Is capable of being combined with other isolated activities.	-Compliments other recreation activities.
	-Is not contrary to other resource concerns. Can be regulated to reduce impacts.	-Is not contrary to other resource values: watershed, wildlife, fisheries.
	-Short experience duration.	-Is not competitive with private sector.
		-Provides for long experience duration.

Evaluation Criteria

1. Dispersed Site - The preferred direction emphasized by the Forest Service is the encouragement of dispersed recreation. Each site will be evaluated by the setting it supports and the duration of experience expected.

Setting:

Single Purpose Sites: Can be a road-side attraction, vista points, or a site isolated from other well traveled routes or experience areas.

Point Spread: 1 - 4 range

Combination Site: Can be a single purpose site that can be combined with other sites. An example is a series of sites along a major travel route.

Point Spread: 4 - 8 range

Complementary Site: Can be a site that complements a destination type area, such as a campground. Parking, camping and picnicing can occur at the main site. Hiking trails to surrounding areas or sites would add to the experience of the base site.

Point Spread: 8 - 10 range

Only one setting can be rated for each site. The highest scare a single site could have is a 4. The highest a combination site could have is a 10. At the same time, the lowest a combination site could have would be an 8.

Duration:

Two Hours or Less: These sites provide a very short recreational experience. They generally occur at a road-side area or vista point.

Points: 2

Two to Four Hours: These sites provide for a longer recreation experience. They generally provide for short distance hikes, picnics or rest areas.

Points: 4

Day Use (V.D.): These are sites such as a campground or hiking trail that require a full day's participation to achieve the recreation experience.

Points: 6

Overnight: These can be Day Use areas but with the planned capability for overnight use. Specifically, these are campgrounds.

Points: 10

NOTE: Sites that provide for overnight experiences were given a 2-point advantage.

2. Developed Site - The Forest Service direction is to provide developed sites when the need is obvious. They are costly to build, maintain and administer.

Setting:

Single Purpose Site: A site that provides for camping, picnicing or resting. There are no recognized dispersed activity sites that would complement the base site.

Points: 5

Multiple Purpose Site: A site that has potential to be expanded and complemented by other dispersed sites or activities.

Points: 10

Duration:

Day Use Only: Because of the cost to build, maintain and administer, the minimum use should be planned for a 12-hour use period (V.D.).

Points: 5

Overnight: Developed sites that respond to overnight use are responsive to the philosophy of providing more and varied recreation closer to urban areas.

Points: 10

3. Energy - Energy needs will be computed for each recreation site based on the shortest round trip route possible. Since there are two population centers involved — Whitefish and Kalispell — calculation for both areas will be necessary. It has also been determined that with reasonable care, any point on the TLRD can be reached on a round trip basis with 10 gallons of fuel or less. The following point system will be used:

Gallons Used	Points
10	2
8	4
6	6
4	8
2 or less	10

A rate of 12.77 m.p.g. will be used to estimate fuel required. For example, to reach an overnight recreation site that is 50 miles from Kalispell the following computation would be made:

$$\frac{50 \text{ miles}}{12.77 \text{ mpg}} = 3.9 \text{ gal}$$

$$3.9 \text{ gal} = \underline{8 \text{ points}}$$

Furthermore, a site that can be used on an overnight basis will have a higher value than one that provides a day use experience.

Day Use will be weighted by 1

Overnight will be weighted by 2

8 points X 2 = 16 points

If that particular site was eighty miles from Whitefish a comparison could be made:

$$\frac{80 \text{ miles}}{12.77 \text{ mpg}} = 6.3 \text{ gal} = 6 \text{ points}$$

6 points X 2 = 12 points

That particular site would obviously be more fuel efficient for recreationist's from the Kalispell area.

4. Age Class - Each site is evaluated on the age group most apt to use that site. If a wide range of age class use is recognized, that site would obviously be more desirable. The intensity of use must also be included since that factor alone might show a strong or minimal need.

Age Class	Points	Low Use	Med Use	High Use	Total Points
		X-1	X-2	X-3	
12-17	2 X				
18-24	2 X				
25-44	2 X				
45-64	2 X				
65+	2 X				

Example: If the three lower age classes are benefited and the use is high for the youngest group and medium for the other groups, the total point score would be 6, 4, 4 for a total of 14 points.

5. Handicap - Sites that respond to the physically handicapped will be rated as follows:

	Points
No response to handicaps	0
Site capable of use by those handicapped with crutches and braces	7
Sites that respond to all forms of physical handicaps	10

The highest point possible for a dispersed site would be as follows:

Dispersed Area	
Complementary site	10 points
Duration of use - overnight	10 points
Energy - less than 2 gal at an overnight site	20 points
Age class - site meets all age classes at a very high use rate	30 points
Handicap - site provides for use by all physically handicapped	10 points
TOTAL	80 points

The lowest point possible would be 7 points.

F. ACTION PLAN. The final step in this paper is to establish an action plan where recreation sites can be identified and scheduled for site evaluation. The improvement of existing sites is of no consequence in this study since they are already recognized to some degree and they are protected. The important sites are those that will be effected by the Mountain Pine Beetle program, the accelerated timber program, or the massive road construction program. Sites that will be influenced should be evaluated as early as possible so that timber Foresters and Engineers can at least be aware of them and avoid damaging or altering their values.

ACTION PLAN

March 1981 - Initiate a recreation site or activity search on Tally Lake Ranger District. Location and ideas will be solicited from Forest Service employees, local residents and outdoor recreation oriented businesses in the Whitefish and Kalispell areas.

April 1981 - List all identified sites and activities. Schedule for site evaluation.

June 1981 - Start the site evaluation process. This process could be started earlier depending on snow and road conditions.

August 1981 - Complete site evaluation process. Establish priority system that:

1. Recognizes the point value for each site and activity.

2. Responds to pressure being created by the Mountain Pine Beetle, timber management, and road programs.

3. Responds to the recreation site needs for 1985, 1990 and the year 2000.

APPENDIX

A. The Selected Alternative from the Mountain Pine Beetle Final Environmental Assessment Report

B. Threatened or Endangered Species on the Flathead National Forest

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APPENDIX A

Alternative G

Harvest identified high-risk lodgepole pine stands through a program of substitution of timber sales in the Forest's 5-year sale plan while at the same time, adhering to the current disaggregate Forest and Rangeland Resource's Planning Act (RPA) pogram levels for the Forest.

This alternative is similar to Alternative E. It is responsive to the RPA goals and, as a result, is also more responsive to the larger log requirements of sawmills in the Flathead area.

Concentrate harvest of high-risk stands in the Tally Lake District with the objective of selling one-half of the District's 320 mmbf lodgepole pine volume in a 3-year period. Fully recognize and incorporate other resource values and constraints established in land management plans, regulations, and policy, including adherence to appropriate watershed guidelines. Maintain a moderate volume level of other species and sizes needed for local mill stability. Pre-road high-risk lodgepole pine stands through capital investment where necessary and work on arterial and major collector roads needed to handle increased timber volume. Effort will be similar to that discussed in Alternative B, except that the main impact will occur for the first 3 years on the Tally Lake District. If the 1982 reevaluation of the mountain pine beetle infestation indicates control, or significant population reduction has occurred, road investment and sell emphasis will shift to Swan Lake, Glacier View, Hungry Horse and Spotted Bear Districts.

The projected rate of high-risk lodgepole pine removal in this alternative is 160 mmbf over a 3-year period (FY 80 - FY 82) on Tally Lake District, and an estimated 19 mmbf from other Flathead Districts.

Larger size logs of other species will be emphasized to the practical maximum in any volumes above the proposed high-risk lodgepole removal for a given year.

Actual volumes sold cannot exceed the financed RPA level for each year. These volumes will be a result of the current RPA program as well as the level funded for each year. The high RPA level from the current program is: FY 80 - 117 mmbf; FY 81 - 125 mmbf; FY 82 - 128 mmbf. These high levels will not be exceeded and will be lowered if financing is at a lower level.

Information from recent timber management planning indicates that the potential yield for the Forest is less than the current, high RPA program level. Therefore, these RPA levels represent a short-term declining yield situation. Future RPA assessments (1980 and beyond) will reflect this information and may result in lower program levels for the Forest.

APPENDIX B

Four species officially listed in the Federal Register as threatened or endangered are involved in the area under consideration. They are the grizzly bear (threatened), gray wolf (endangered), peregrine falcon (endangered) and bald eagle (endangered). Maps of delineated essential habitat and occupied habitat on the Flathead National Forest may be referenced in the following publications listed in the VIII. Literature Cited: Gray Wolf Essential Habitat; Bald Eagle Essential Habitat; Peregrine Falcon Essential Habitat; and Grizzly Bear Recovery Plan.

No sensitive species, as described in Forest Service Manual 2670, which are proposed for listing onto the threatened and endangered species list are known to occur on the Flathead National Forest at this time. Therefore, these species will not be considered in the evaluation. Any species added to threatened or endangered species classifications at a later date would be considered in any future biological evaluations.

Grizzly Bear - Threatened Species

Approximately 2,055,648 acres of the Flathead National Forest is classified as occupied grizzly bear habitat (Grizzly Bear Recovery Plan Technical Review Draft, 1980), or essential grizzly bear habitat (Forest Service memorandum, 2630, Endangered and Threatened Species -Grizzly Bear, February 3, 1978). This acreage represents 38 percent of the occupied habitat within the Northern Continental Divide Grizzly Bear Ecosystem. Flathead National Forest land west of U.S. Highway 93 receives only occasional grizzly use, while nearly all Flathead National Forest land east of this highway is considered occupied grizzly habitat (figure A).

Important key habitats or constituent elements for the grizzly on the Flathead National Forest include, but are not limited to, snowchutes, riparian zones, burns, shrubfields, sidehill parks, meadows, forested areas, timber cutting units, ridgetops, slabrock, and big game wintering ranges. These habitats provide for denning, travel, cover space, and feeding areas. The Flathead National Forest in general provides excellent habitat for the grizzly bear. Generally grizzly bears utilize low elevation zones during the summer and fall. Denning occurs from November to May in higher elevation areas receiving heavy snowfall.

Special considerations or exclusion of activities within key habitats will be necessary within the North, Middle, and South Forks of the Flathead River and within the Swan River drainage, which have been identified as occupied habitat. Large portions of the Tally Lake and Swan Lake Districts west and south of U.S. Highway 93 and Montana Highway 35 are outside occupied habitat and will not require special considerations at this time unless new sightings occur or emigration of grizzlies occurs into the area. Portions of these drainages, especially the North Fork, are under intensive study by the Border Grizzly Research Project from the University of Montana.

Gray Wolf - Endangered Species

The gray wolf occupies habitat within the North, South, and Middle Forks of the Flathead River as well as portions of the Swan River drainage. Approximately 1,352,500 acres of the Flathead National Forest has been delineated as essential habitat for the gray wolf (Forest Service 1980, figure B). This area has been identified as an area where natural wolf recovery could take place (Wolf Ecology Project, 1979). Wolves are generally associated with areas high in big game populations (food source) and low in human-related activities.
Specific wolf use patterns on the Flathead National Forest are largely unknown, except for one wolf trapped and radio-collared by the Ecology Project on the North Fork of the Flathead River. Sightings and signs are observed periodically throughout a good portion of the Forest.

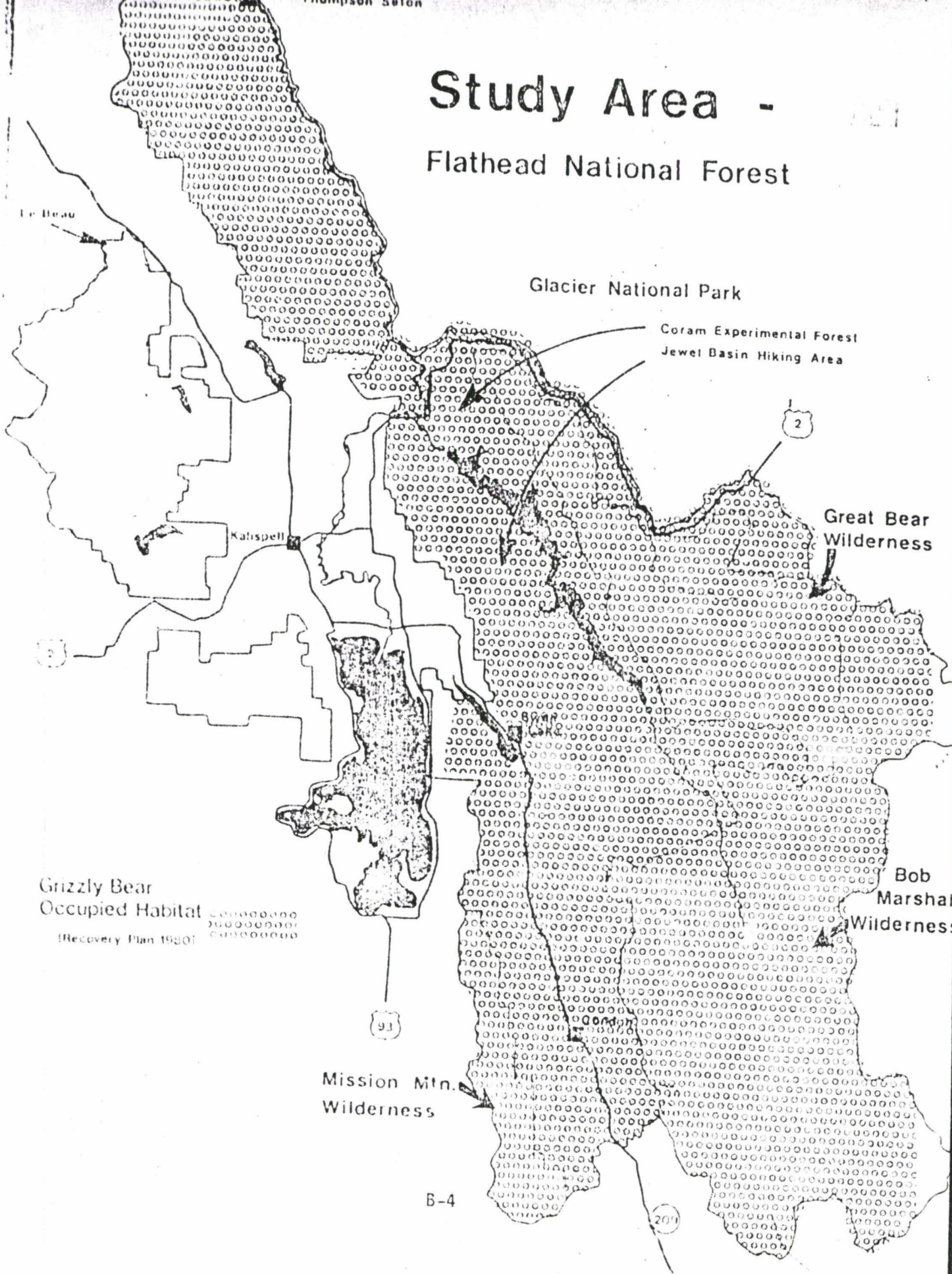
The current research findings on habitat use, activity patterns, and status on wolves in Montana can be found in the Wolf Ecology Project Annual and Quarterly Reports, Wilderness Institute, University of Montana, Missoula, Montana. Generally, the wolf is associated with those habitats frequented by their primary prey species; e.g., ungulates, beaver, snowshoe hare, and voles. Ungulate winter concentration areas and riparian habitats appear to be important for wolves. The key habitat constituents for the wolf are: year-round prey base, ungulate winter ranges, ungulate parturition ranges, wolf rendezvous sites, den sites, and space. Like the grizzly, areas with low potential for human conflict are important for the recovery of the wolf. Essential wolf habitat on the Flathead National Forest occurs on all Ranger Districts. A large portion of the Tally Lake District lies outside essential habitat, however, special considerations for the wolf would not be required in this area unless new information on possible wolf occurrence or sightings occur here in the future, or wolf emigration occurs into this area at a later date. Wolf study by the Wolf Ecology Project is occurring on all three forks of the Flathead. Research efforts have been concentrated on the North Fork.

Peregrine Falcon - Endangered Species

The peregrine falcon utilizes the Flathead National Forest during spring and fall migration periods and for nesting on a very limited basis. Approximately 70,000 acres of the Flathead National Forest have been delineated by the Forest Service as essential habitat for the peregrine falcon (Forest Service 1978b). The peregrine is generally associated with larger valleys that contain cliffs suitable for nesting. Valleys are used by the peregrine for preying on small birds and waterfowl. One area of occupied habitat on the South Fork of the Flathead River will require special considerations. Other areas are identified as suitable. Unoccupied habitat may require special considerations if the species is located at a later date or to maintain this habitat as potential nesting habitat. These areas include Limestone Wall, Gunsite Peak, Chipmunk Peak, Little Bitterroot River, Ashley Lake, Pilot Knob, Blaine Mountain, Upper Stillwater Lake, and an area between Flathead and Swan Lakes.

Bald Eagle - Endangered Species

The bald eagle uses most of the major lake and river systems on the Flathead National Forest and the study area either for nesting, for feeding during the migration season, or for wintering. An extremely large concentration of bald eagles (probably the largest in the lower 48 States) occurs in the fall because of their attraction to migratory fish in the lakes and rivers of this area. Approximately 380,000 acres of the Flathead National Forest has been delineated by the Forest Service as essential habitat for the bald eagle (Forest Service 1978a). Of that 380,000 acres 16 percent, or about 60,000 acres, is National Forest ownership (figure C). The bald eagle is generally associated with rivers and lakes where it feeds on fish, carrion, and other foods. Areas requiring special considerations occur on all five Ranger Districts. Bald eagles occur along all major rivers and along major lake shorelines. Identified occupied areas used by eagles include the North, South, and Middle Forks of the Flathead, Hungry Horse Reservoir, the main Flathead River, Stillwater River, Tally Lake, Whitefish Lake, Flathead Lake, Swan Lake area, and Little Bitterroot Lake. Five bald eagle nests have been identified within the influence of the study area. Much of the area under study, distant from larger waterways, will not require special considerations at this time, unless sightings occur or nests are located at a later date, because it is unoccupied habitat.


Study Area -
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Glacier National Park
Coram Experimental Forest
Jewel Basin Hiking Area
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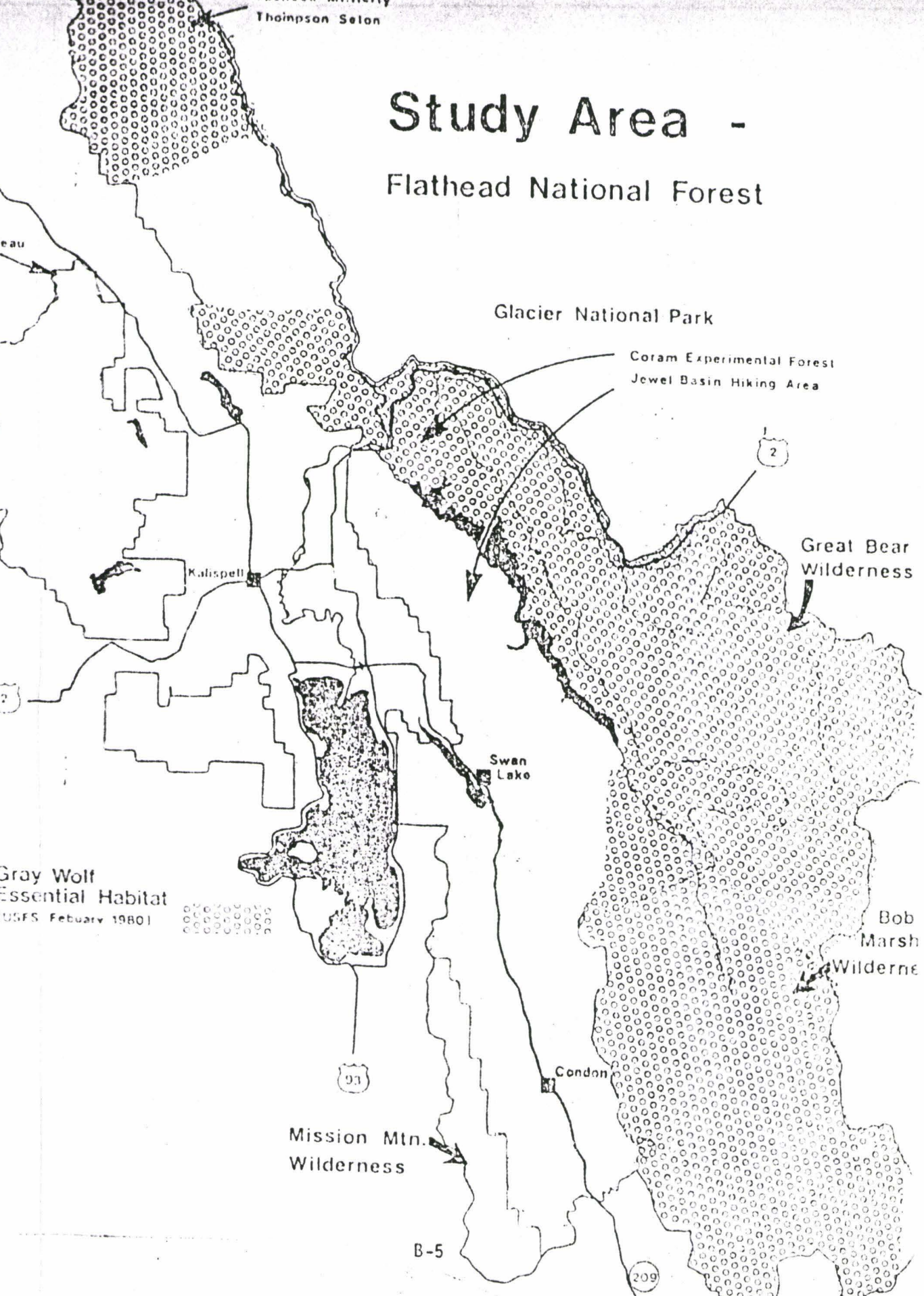
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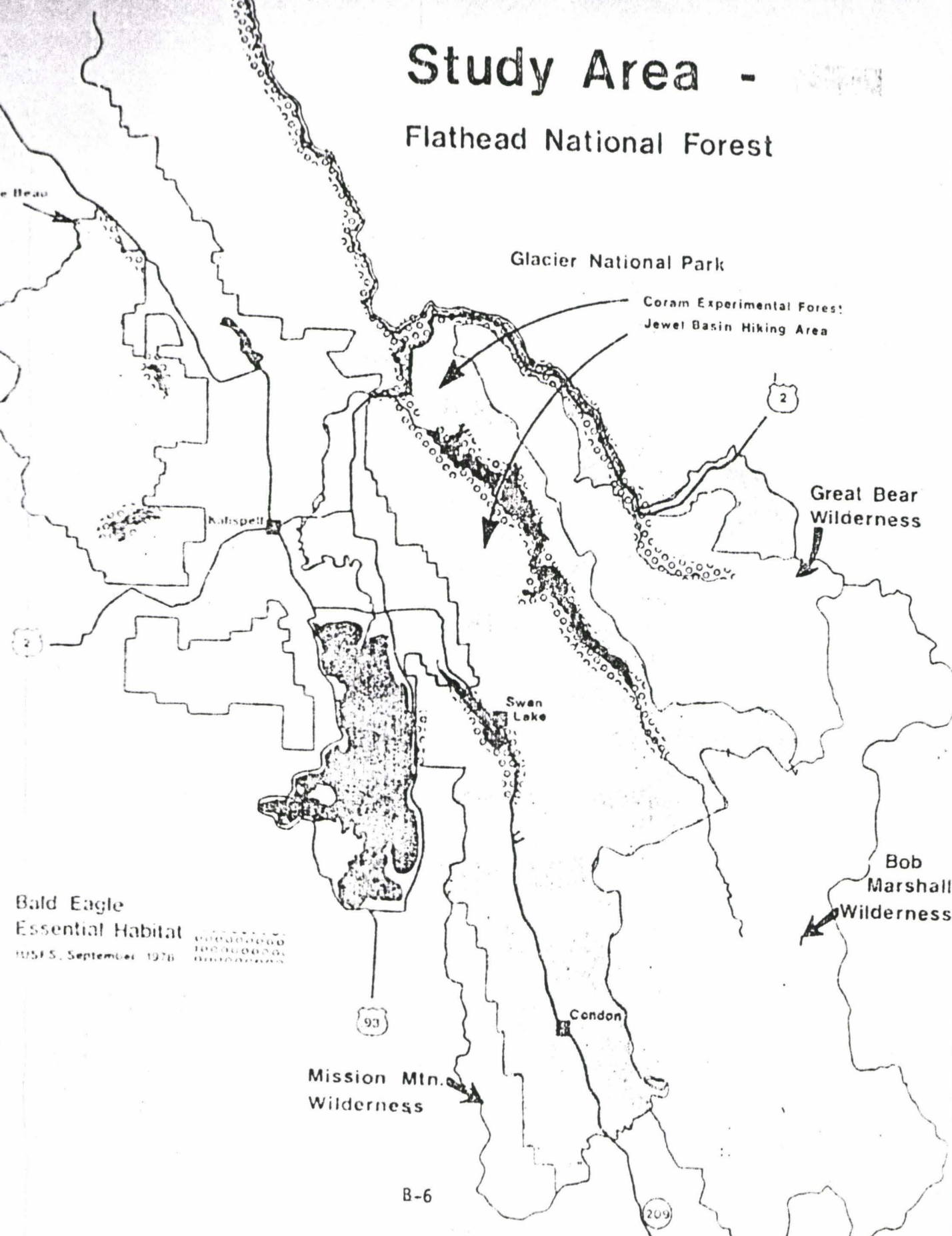
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Great Bear Wilderness
Kalispell
Swan Lake
Bald Eagle Essential Habitat
Bob Marshall Wilderness
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